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THE GENUS *ENCYCLIA* HOOK. (ORCHIDACEAE) IN THE BAHAMA ARCHIPELAGO

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The neotropical genus *Encyclia* is represented by 13 species, 2 varieties, and 2 natural hybrids in the Bahama Islands, including the Turks and Caicos Islands. As such, it is the largest orchid genus, comprising more than 27 percent of all the orchid species distributed in the Bahama archipelago. For a complete inventory of the 52 orchid taxa that occur in the Bahama Archipelago, see Correll and Correll (1982). Of the 17 taxa of *Encyclia* in the Bahama archipelago, 7 are endemic, 3 share distributions only with Florida, 3 share distributions only with Cuba, and 1 shares its distribution only with Hispaniola. The remaining 3 taxa are more widely distributed (Table I).

Adams, et al., (1982) described 9 distinct and recognizable habitats that occur on the islands of the Bahama Archipelago. Species of the genus *Encyclia* occur in all of these habitats except pine forests and saltwater marsh and tidal flats. While the majority of the taxa in the genus occupy several habitats, a definite habitat preference exists, with all 17 taxa occurring either in high coppices, low coastal coppices, or both (Table II).

This paper represents the first modern and comprehensive taxonomic and ecological treatment of the genus in the archipelago.

For the purposes of this floristic study, we have chosen to use the broader generic concept as proposed by Dressler (1961). This concept differs from the original concept of *Encyclia* as proposed by Hooker (1828) and later expanded by Schlechter (1915). The

Dressler (1961) concept of *Encyclia* includes two species, *Encyclia boothiana* (Lindl.) Dressler and *Encyclia cochleata* (L.) Lemee, that do not correspond to the Hooker (1828) and Schlechter (1915) generic concept.

TAXONOMIC TREATMENT

Encyclia Hook., Bot. Mag. 55: t2831. 1828.

Epiphytic or epilithic, rhizomatous plants. Stem pseudobulbous having one to many leaves at apex. Leaves entire, thinly coriaceous to rigid or semi-terete, slender and elongated. Inflorescence terminal, a simple raceme or panicle, often with an elongated peduncle, occasionally originating within a slender, conduplicate, foliaceous sheath. Flowers showy or inconspicuous, variously arranged, often non-resupinate. Sepals and petals free, spreading, or reflexed. Labellum free or variously adnate to column, entire or 3-lobed, disc variously callose. Column fleshy, without basal foot, cylindrical, occasionally apically 3-to 5-dentate, commonly with auricles. Anther terminal, operculate, incumbent, 2-celled. Pollinia 4 (8 in triandrous varieties), equal, compressed, waxy, connected by a viscidium, without a stipe or gland. Stigmata 2, confluent, transverse. Capsule ovoid to ellipsoid, with prominent ribs or broadly 3-winged.

Type: **Encyclia viridiflora** Hook.

KEY TO SPECIES IN THE BAHAMA ARCHIPELAGO

1. Inflorescence basally enclosed by scarious slender conduplicate foliaceous sheath2
2. Flowers resupinate3
 3. Column with one anther ... 1. *E. boothiana* var. *boothiana*
 - 3a. Column with three anthers
 - 2. *E. boothiana* var. *erythronioides*
 - 2a. Flowers non-resupinate4
 4. Column with one anther 4. *E. cochleata* var. *cochleata*
 - 4a. Column with three anthers
 - 5. *E. cochleata* var. *triandra*
- 1a. Inflorescence with basal foliaceous sheath absent5

5. Leaves non-deciduous, abscission layer at leaf base absent . . .
 6
6. Labellum yellow with radiating purple lines; flowers May to
 July 16. *E. ×bajamarensis*
- 6a. Labellum white with radiating purple lines; flowers July
 through September 7
7. Labellum to 2.7 cm long, 2.8 cm wide; callosity on label-
 lum under column is two lateral erect keels merging
 into a single keel at junction of lobes and extending
 into disc 8. *E. gracilis*
- 7a. Labellum to 1.9 cm long, 1.9 cm wide; callosity on label-
 lum under column is two lateral erect keels joined by a
 third keel at junction of lobes and all three keels
 extending into disc 17. *E. ×lucayana*
- 5a. Leaves normally deciduous 8
8. Pseudobulbs elliptic to ovate 9
9. Labellum recurved or reflexed 10
10. Auricles at apex of column pointed and incurved; disc
 of labellum with two fleshy pads and strongly
 pleated; callosity under column terminating in two
 fleshy tubercles 11. *E. plicata*
- 10a. Auricles short, square; disc of labellum without
 fleshy pads and without pleats; lateral margins of
 disc revolute 12. *E. rufa*
- 9a. Labellum not recurved 11
11. Auricles absent 12
12. Labellum purple 13. *E. selligera*
- 12a. Labellum white or yellowish-white with purple
 spots or lines 7. *E. fucata*
- 11a. Auricles present at apex of column 13
13. Pedicel muricate 15. *E. withneri*
- 13a. Pedicel glabrous 14
14. Callosity on labellum under column distally ter-
 minating abruptly in a fleshy 3-dentate plate
 6. *E. fehlingii*
- 14a. Callosity on labellum under column not termi-
 nating abruptly 14. *E. tampensis*
- 8a. Pseudobulbs linear-lanceolate, narrowly attenuate toward
 apex 15

- 15. Lateral margins of disc of labellum revolute
 10. *E. inaguensis*
- 15a. Lateral margins not revolute 16
- 16. Flowers ascending and closely spaced on short, erect
 lateral branches 3. *E. caicensis*
- 16a. Flowers not ascending or closely spaced, lateral
 branches not erect 9. *E. hodgeana*

1. ***Encyclia boothiana*** (Lindl.) Dressler, *Brittonia* 13:269, 1961,
 var. ***boothiana*** (Fig. 1).

Basionym: *Epidendrum boothianum* Lindl., *Bot. reg.* 24:Misc.
 5. 1838. HOLOTYPE: Sutton s.n., Cuba (K-L, photograph
 seen¹).

Plant epiphytic, rhizomatous, to 26 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping, completely enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, suborbicular to ovate, strongly flattened, to 6 cm long, 6 cm wide, 15 mm thick, basally enclosed by fugacious scarious sheaths, to 3-leaved at apex; leaves thinly coriaceous, keeled, oblong to oblanceolate, obtuse to acute, apex recurved, to 15 cm long, 2.0 cm wide; inflorescence terminal, to 20 cm tall; peduncle slender, loosely racemose above, basally enclosed by a scarious, slender, linear-oblong, conduplicate, foliaceous sheath; raceme loosely few-flowered, to 15-flowered; floral bracts minute, subulate, acute, concave, membranaceous, to 3 mm long, 2 mm wide; ovary pedicellate, slender, to 17 mm long; sepals green with purplish-brown irregular blotches, glossy, rigid, oblanceolate, acute to subacuminate, margins slightly revolute, to 15 mm long, 4 mm wide; petals green with purplish-brown irregular blotches, glossy, rigid, narrowly oblanceolate, obtuse to acute, to 14 mm long, 4 mm wide; labellum basally adnate to column, entire or obscurely 3-lobed, to 14 mm long, 6 mm wide, rhombic or trapeziform in outline, white to greenish white, all lobes obtuse, lateral lobes reflexed, callosity on disc white, edged with purple, tridentate, middle tooth thickened extending to apex of disc; column to 8 mm long, 6 mm wide, white, greenish at base, with purple blotches, each side strongly longitudinally grooved, apex of

¹All specimens cited in this paper have been examined, unless otherwise noted.

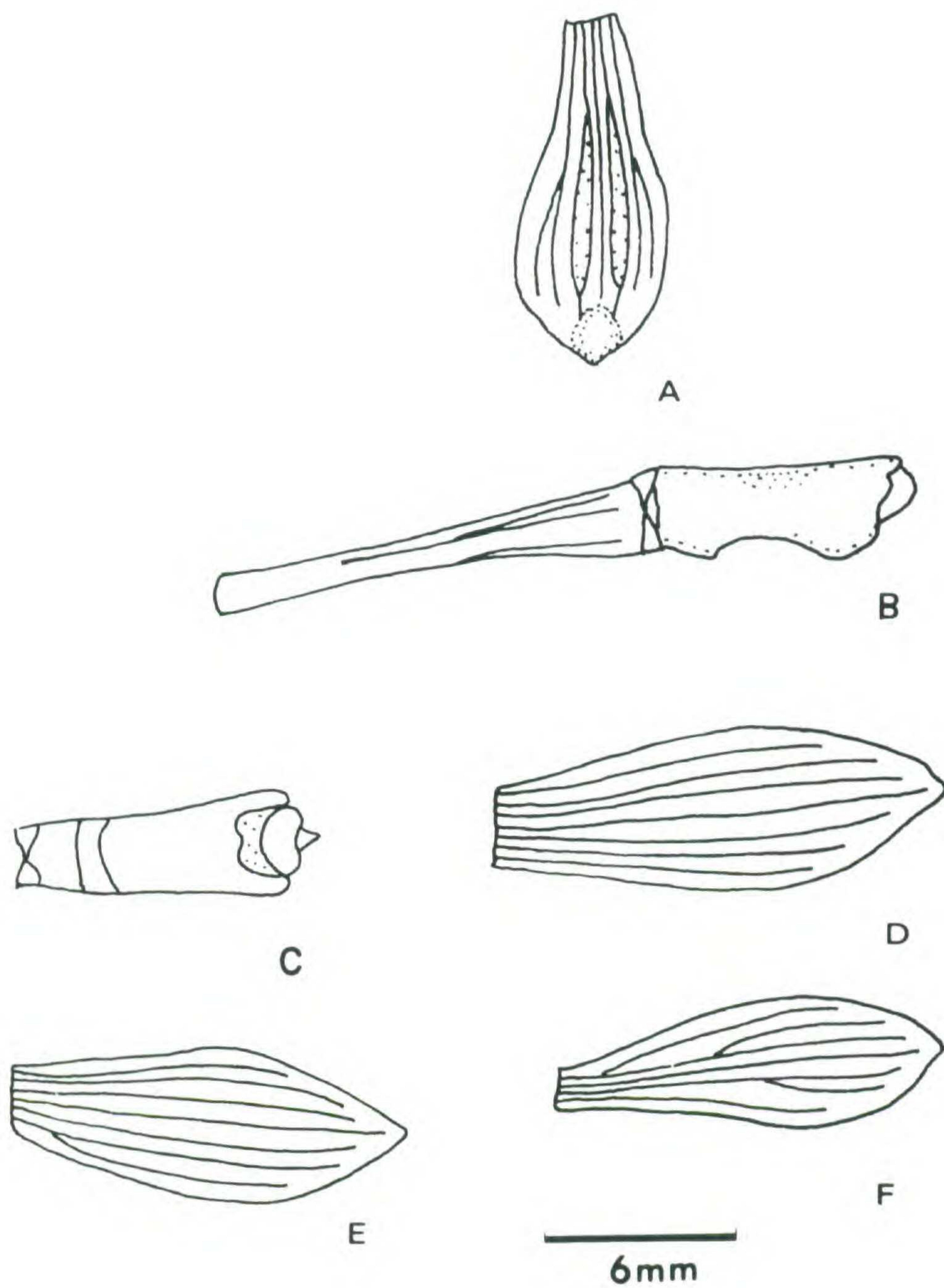


Figure 1. *Encyclia boothiana* (Lindl.) Dressler var. *boothiana*. **A**. Labellum, frontal view; **B**. Column and ovary, lateral view; **C**. Column, ventral view; **D**. Dorsal sepal; **E**. lateral sepal; **F**. Petal.

Table II. The species of *Encyclia* in the Bahama Archipelago and the habitats within which they occur.

	Beach & Dune	Coastal Rock Scrub	Low Coastal Coppice	High Coppice	Inland Scrub	Pine Forest	Freshwater Marsh & Swamp	Saltwater Marsh & Tidal Flats	Mangrove Forest	Disturbed Areas
<i>Encyclia boothiana</i> var. <i>boothiana</i>				•						
<i>Encyclia boothiana</i> var. <i>erythronioides</i>				•					•	
<i>Encyclia caicensis</i>	•	•	•							
<i>Encyclia cochleata</i> var. <i>cochleata</i>				•						
<i>Encyclia cochleata</i> var. <i>triandra</i>				•						
<i>Encyclia fehlingii</i>			•	•					•	
<i>Encyclia fucata</i>			•	•			•		•	
<i>Encyclia gracilis</i>	•	•	•		•					•
<i>Encyclia hodgeana</i>		•	•	•	•					
<i>Encyclia inaguensis</i>		•	•							
<i>Encyclia plicata</i>			•	•					•	
<i>Encyclia rufa</i>	•	•	•	•	•					
<i>Encyclia selligera</i>			•							
<i>Encyclia tampensis</i>			•							
<i>Encyclia withneri</i>				•						
<i>Encyclia</i> x <i>bajamarensis</i>			•							
<i>Encyclia</i> x <i>lu cayana</i>			•							•
Total Number of Taxa	3	5	12	10	3	0	1	0	4	2

column 3-toothed, anther yellow, pollinia 4; capsule pendent, 3-winged, to 1.5 cm long, 1.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Andros**, high coppice, 6 mi NW of Love Hill settlement, 10 July 1976, *Sauleda 1882* (FAU).

ADDITIONAL DISTRIBUTION: **Cuba**, *Hioram 2117* (NY); Isle of Pines, Cuba, *Taylor 78* (NY); **Haiti**, *Leonard and Leonard 13381* (NY); **Mexico**, *Nagel 4967* (US); **British Honduras**, *Gentle 1146* (NY).

REPRODUCTIVE PERIOD: May through October.

ECOLOGY: This rare species is found growing epiphytically on *Lysiloma latisiliqua* (L.) Benth., and is found in High Coppices.

ADDITIONAL COMMENTS: This species does not properly belong in the genus *Encyclia* Hook.. However, in the absence of a comprehensive monographic treatment which unequivocally establishes its true generic position, we have chosen to include it here.

2. *Encyclia boothiana* (Lindl.) Dressler var. **erythronioides**

(Small) Luer, Florida Orchidist, **14**: 29. 1971 (Fig. 2).

Basionym: *Epidendrum erythronioides* Small, Fl. Southeastern U.S., 328. 1903.

Epicladium boothianum (Lindl.) Small var. *erythronioides* (Small) Acuna, Cat. Descr. Orq. Cub **60**: 89. 1938. HOLOTYPE: Key Largo, Florida, *Curtis s.n.* (NY).

Plant epiphytic or epilithic, rhizomatous, to 23 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping, completely enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, suborbicular to ovate, strongly flattened, to 5 cm long, 4 cm wide, 1.5 cm thick, basally enclosed by fugacious scarious sheaths, to 3-leaved at apex; leaves thinly coriaceous, keeled, oblong to oblanceolate, obtuse to acute, apex reflexed, to 12 cm long, 1.5 cm wide; inflorescence terminal, to 18 cm tall, peduncle slender, loosely racemose above, basally enclosed by a scarious, slender, linear-oblong, conduplicate foliaceous sheath, raceme loosely few-flowered, to 8-flowered; floral bracts minute, membranaceous, subulate, acute, concave, to 3 mm long, 2 mm wide; ovary pedicellate, slender, to 17 cm long; sepals green with purplish-brown irregular blotches, glossy, rigid, oblanceolate, acute to subacuminate, margins slightly revolute, to 14 mm long, 3 mm wide; petals green with purplish-brown irregular blotches, glossy, rigid, narrowly oblanceolate,

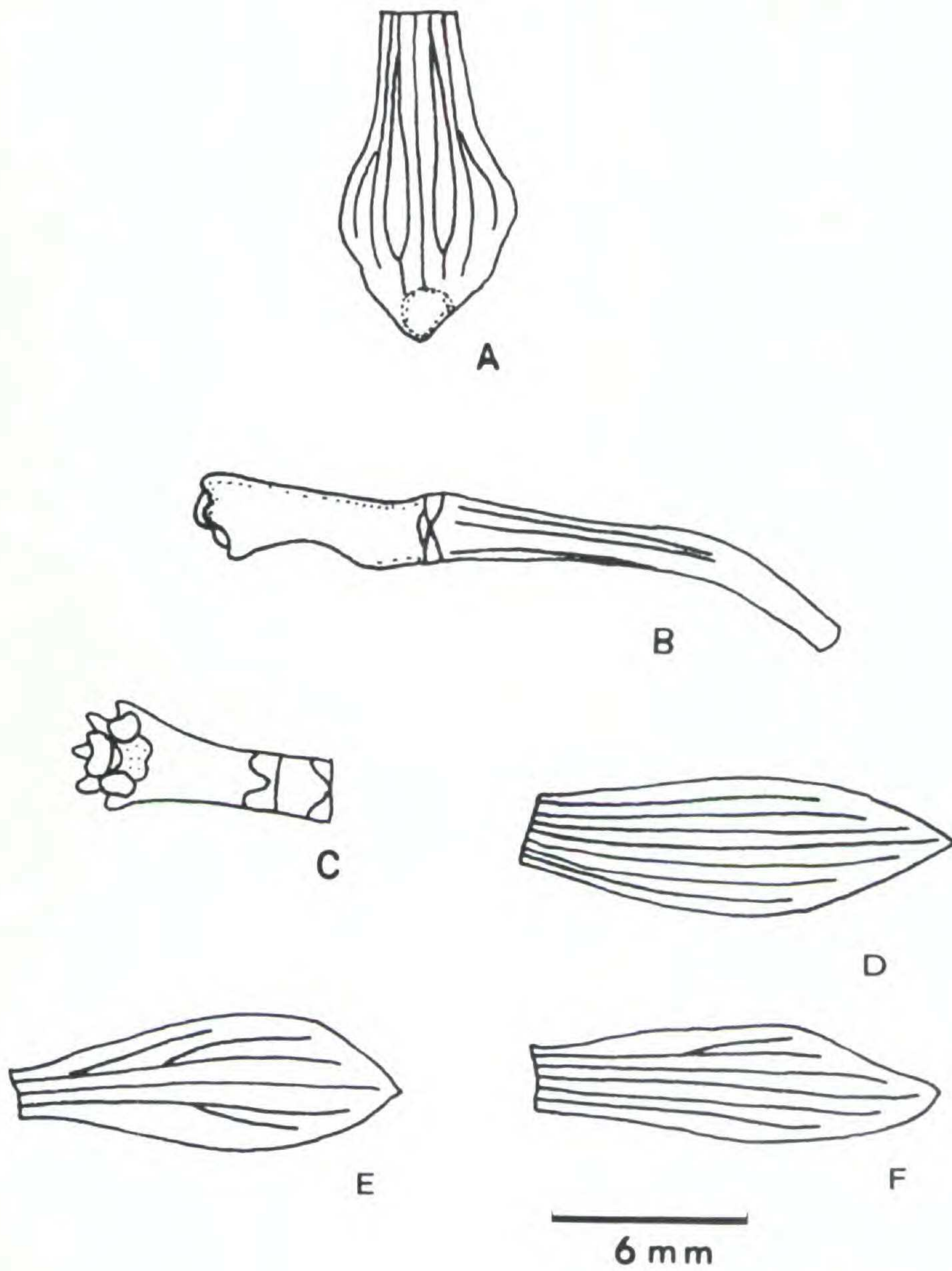


Figure 2. *Encyclia boothiana* (Lindl.) Dressler var. *erythronioides* (Small) Luer. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

obtuse to acute, to 13 mm long, 3 mm wide; labellum basally adnate to column, entire or obscurely 3-lobed, rhombic or trapeziform in outline, white to greenish-white, to 12 mm long, 5 mm wide, all lobes obtuse, lateral lobes recurved, callosity on disc white, edged with purple, tridentate, middle tooth thickened, extending to apex of disc; column to 8 mm long, 6 mm wide, white, greenish at base, with purple blotches, each side strongly longitudinally grooved, apex of column 5-toothed, with 3 yellow anthers, central anther with 4 pollinia, 2 lateral anthers with 2 pollinia each; capsule pendent, 3-winged, to 1.5 cm long, 1.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Andros**, high coppice, 3 mi NW of Love Hill settlement, 10 July 1976, *Saulea* 1102 (M), 1104 (FTG), 1105 (NY), 1106 (F), 1107 (us), 1108 (SEL), 1109 (P), 1110 (AMES), 1111 (K), 1113 (F); mangrove along lake shore, 1 mi NW of Love Hill settlement, 16 April 1977, *Saulea* 1865 (FAU); Deep Creek, 18 Aug.–10 Sept. 1906, *Brace* 5133 (F, NY).

ADDITIONAL DISTRIBUTION: **Florida**, *Curtis s.n.* (NY).

REPRODUCTIVE PERIOD: May through September.

ECOLOGY: This variety is found growing epiphytically on *Lysiloma latisiliqua* (L.) Benth., *Coccoloba diversifolia* Jacq., *Rhizophora mangle* L. and *Conocarpus erectus* L. The habitats in which it is found are High Coppice and Mangrove Forest. This triandrous variety is the most common variety found in the Bahama Islands and is usually autogamous and occasionally cleistogamous.

3. ***Encyclia caicensis*** Saulea and Adams, *Selbyana* 2 (4): 340. 1978 (Fig. 3).

TYPE: South Caicos, 200 m SE of airport runway, large clump growing epiphytically on *Pithecellobium bahamense* Northrop, 11 Feb. 1978, in flower, *Saulea*, *Adams*, *Adams*, and *Correll* 2031 (HOLOTYPE: NY; ISOTYPES: AMES, K, SEL, US, USF).

Plant epiphytic or rarely epilithic, rhizomatous, to 260 cm tall; roots numerous, slender to thick, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by scarious imbricating sheaths; secondary stems modified into pseudobulbs, erect, clustered, distinctly elongated, attenuate, linear-lanceolate, to 15 cm long, 5 cm thick, enclosed by scarious imbricating sheaths, to 4-leaved at apex; leaves coriaceous to rigid, erect, linear to linear-lanceolate, acute, to 60 cm long, 3.0 cm wide; inflorescence terminal,

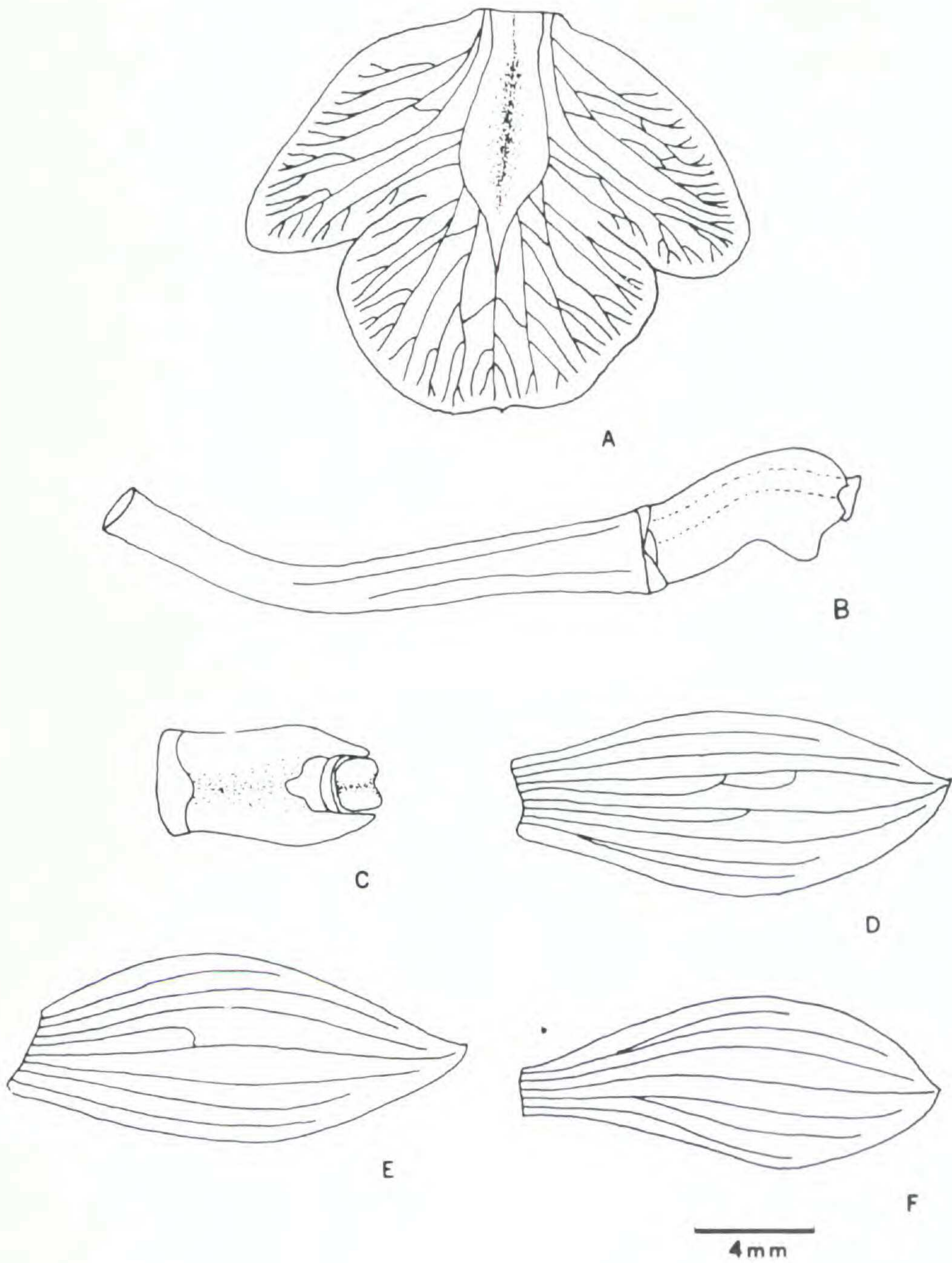


Figure 3. *Encyclia caicensis* Sauleda and Adams. A. Labellum, frontal view; B. Column and ovary, lateral view; C. Column, ventral view; D. Dorsal sepal; E. Lateral sepal; F. Petal.

to 215 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, lateral branches stiff and erect, to 60 ascending flowers; floral bracts broadly ovate-triangular, acute, to 3.0 mm long, 4.0 mm wide; ovary pedicellate, slender, to 2.8 cm long; sepals greenish-yellow to tan suffused and/or striped with reddish-brown, elliptical, acute, to 1.8 cm long, 7.0 cm wide; petals greenish-yellow to tan with reddish-brown suffusion or striping, obovate, acute, to 1.6 cm long, 5.0 mm wide; labellum free, 3-lobed, to 1.9 cm long, 1.9 cm wide, white to yellowish-white with radiating reddish-purple stripes, lateral lobes yellow, orbicular to ovoid, obtuse, erect, embracing column, midlobe with yellowish margin, orbicular, apically recurved, callus distinctly white with reddish-purple stripes, composed of two erect, decurrent lateral keels uniting at midlobe; column short, blunt, to 8.0 mm long, 5.0 mm wide, white to greenish-white, streaked with purple, with membranous, incurved, rounded auricles, anther cap yellow; capsule pendent, to 2.8 cm long, 2.1 cm thick.

DISTRIBUTION IN THE TURKS AND CAICOS ISLANDS: **South Caicos**, SE of runway, epiphytic, 11 Feb. 1978, *Saulea, Adams, Adams, and Correll 2026* (FTG), 2027 (P), 2028 (LE), 2029 (F), 2030 (S). **Middle Caicos**, Moujean Harbor, on top of ridge, 11 Feb. 1978, *Saulea, Adams, and Correll 2045* (FAU). **North Caicos**, Horse Stable, epiphytic, 12 Feb. 1978, *Saulea, Adams, Adams and Correll 2046* (BM); Whitby's Landing and vicinity, 28 Feb.–2 March 1911, *Millspaugh and Millspaugh 9168* (F); between Bottle Creek and Whitby, epiphytic on palms, near beach, 24 April 1954, *Lewis s.n.* (AMES). **Ambergris Cay**, 12 March 1911, *Millspaugh and Millspaugh 9299, 9304* (F, NY). **Little Ambergris Cay**, 13 March 1911, *Millspaugh and Millspaugh 9319* (F, NY). **Dellis' Cay**, 4 March 1911, *Dellis 1* (F).

REPRODUCTIVE PERIOD: January through April.

ECOLOGY: On islands in the Caicos Group this heliophilic species is abundant, growing epiphytically on *Pithecellobium bahamense* Northrop, *Pithecellobium guadalupense* (Pers.) Chapm., *Coccoloba tenuifolia* L., *Coccoloba uvifera* (L.) Jacq. and *Coccothrinax argentata* (Jacq.) L.H. Bailey and rarely epilithically on Pleistocene limestone. The habitats in which it is found are Beach and Dune, Coastal Rock Scrub, and Low Coastal Coppice. Endemic.

ADDITIONAL COMMENTS: Specimens of this species were first collected on the Caicos Islands in 1911 by Millspaugh and Millspaugh and were incorrectly identified as *Epidendrum diurnum* (Jacq.) Cogniaux, an epithet subsequently transferred to *Encyclia diurna*

(Jacq.) Britton and Millspaugh and applicable to a South American species which is distinct from this species.

Encyclia caicensis is similar to and may be confused with *Encyclia hodgeana* (Hawkes) Beckner and non-reproductive plants of *Encyclia inaguensis* (Nash) Britton and Millspaugh.

Encyclia caicensis differs from *E. hodgeana* vegetatively, by having narrower and more rigid and erect leaves. Florally, these two species differ significantly. The inflorescence of *E. caicensis* has shorter and more numerous lateral branches which are distinct in their ascending habit. The flowers are smaller, more numerous and more tightly clustered than in *E. hodgeana*. The cupped shape and ascending habit of the flowers of *E. caicensis* further separate it from its sympatric congener, *E. hodgeana*. Furthermore, the labelum is not as deeply three-lobed, the labellum apex (disc) distinctly more recurved, and the column disproportionately shorter in *E. caicensis* than in *E. hodgeana*.

Encyclia inaguensis has distinctly narrower leaves than immature and small specimens of *E. caicensis* (and *E. hodgeana*) with which it might be confused. All three species have large sympatric populations occurring on the Caicos Islands.

4. ***Encyclia cochleata*** (L.) Lemee, Fl. Guyane Francaise I: 418, 1955, var. ***cochleata*** (Fig. 4).

Basionym: *Epidendrum cochleatum* L. Sp. Pl., ed. 2, 2:1351. 1763.

Anacheilium cochleatum (L.) Hoffmsg., Verz. Orch. 21. 1842. HOLOTYPE: Boerhaave's copy, made by Claude Aubriet, of the Plumier plate, reproduced by Burman in Plantarum Americanarum Fasciculus (1758, p. 180, t. 185, f. 2) and now at the University Library at Groningen, Netherlands.

Plant epiphytic or epilithic, rhizomatous, to 50 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, elliptic to ovate, stipitate below, strongly compressed, to 15 cm long, 5 cm wide, basally enclosed by fugacious scarious sheaths, to 3-leaved at apex; leaves thinly coriaceous, elliptic to lanceolate, acute, to 24 cm long, 4 cm wide; inflorescence terminal, to 35 cm tall, flowers opening serially, peduncle slender, loosely racemose above, basally

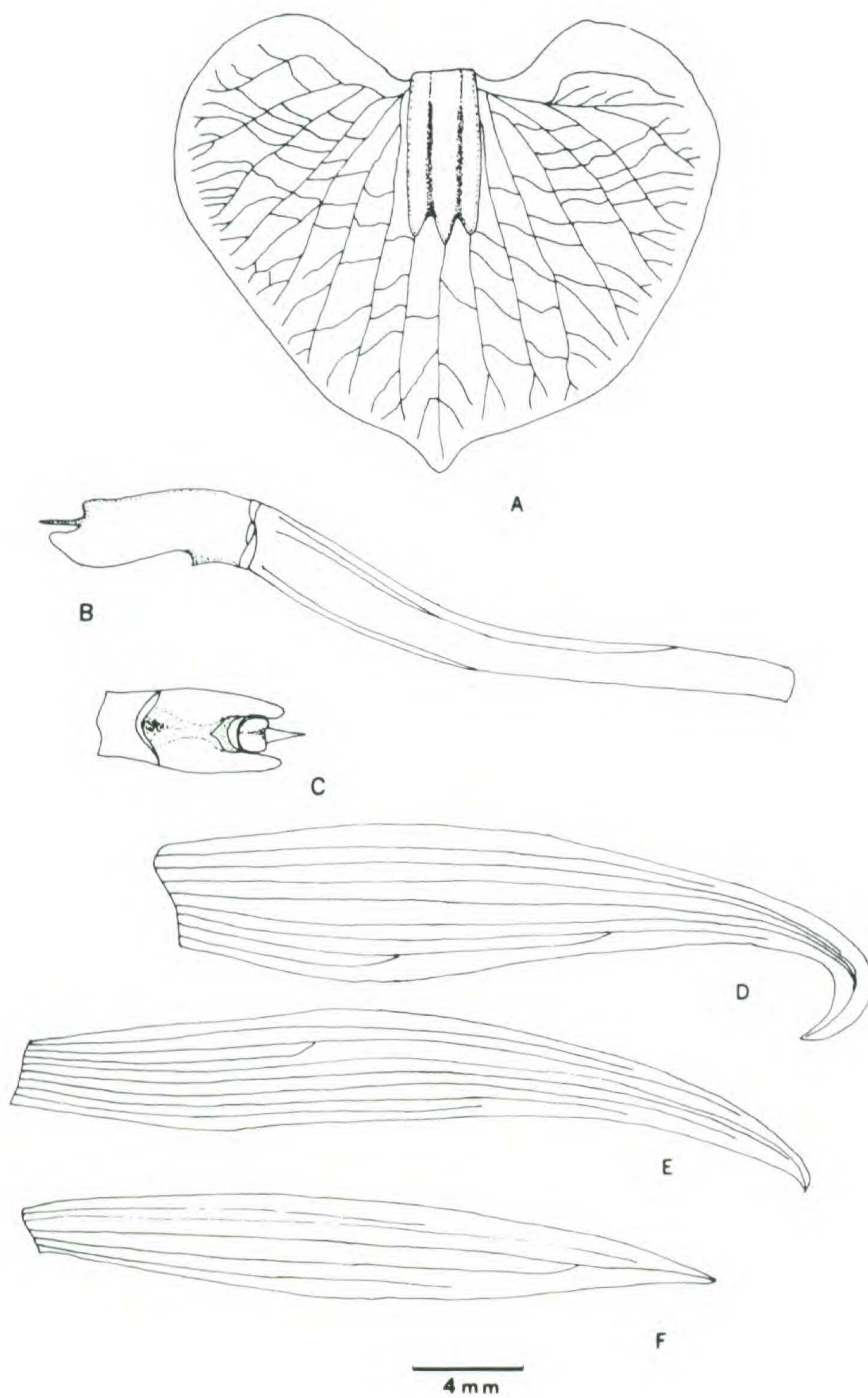


Figure 4. *Encyclia cochleata* (L.) Lemee var. *cochleata*. **A**. Labellum, frontal view; **B**. Column and ovary, lateral view; **C**. Column, ventral view; **D**. Dorsal sepal; **E**. Lateral sepal; **F**. Petal.

enclosed by a scarious, slender, linear-oblong, conduplicate, foliaceous sheath; raceme loosely few-flowered; to 15 non-resupinate flowers; floral bracts minute, triangular to lanceolate, acute to acuminate, concave, membranaceous, to 6 mm long, 4 mm wide; ovary pedicellate, slender, triquetrous, winged, to 3.5 cm long; sepals and petals green or greenish-yellow with purple blotches near the base, linear-lanceolate, subacuminate, twisted and reflexing inward, sepals to 4.5 cm long, 4 mm wide, petals to 3 cm long, 3 mm wide; labellum adnate to middle of column, entire, broadly orbicular to cordate, to 2 cm long, 2 cm wide, deep purple with basal portion greenish-white with radiating purple veins, disc with a yellow sulcate to ligulate callosity at base, margins undulate; column to 8 mm long, 4 mm wide, green with purple spots, erect, stout, apex 3-toothed, lateral teeth longer than mid-tooth, mid-tooth blunt and fleshy, single orange anther containing 4 pollinia; capsule pendent, 3-angled, broadly winged, to 4 cm long, 2.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, low coppice, Abaco Heights, 11 April 1979, *Sauleda and Correll 2283* (FAU). **Andros**, high coppice, 6 mi NW of Love Hill settlement, 10 May 1975, *Sauleda 1039* (AMES); Owens Town, high coppice, 8 May 1978, *Sauleda, Correll, Eckenwalder and Stevenson 2115* (FAU); Congo Town, 6 June 1975, *Sauleda 1054* (FAU); high coppice, 6 mi NW Love Hill settlement, 10 July 1976, *Sauleda 1100* (F), *1101* (K); coppice near Nicholl's Town, 4-5 Feb. 1905, *Small and Carter 8975* (NY). **New Providence**, Maiden Head Coppice, on trees, 24 Aug. 1904, *Britton and Brace 244* (F, NY). **Grand Bahama**, E of Coral Road, Freeport, 24 Jan. 1976, *Correll and Popenoe 46653* (FTG).

ADDITIONAL DISTRIBUTION: **Cuba**, *Shafer 13457* (NY); **Haiti**, *Nash 670* (NY); **Dominican Republic**, *Valeur 81* (NY); **Jamaica**, *Underwood 252* (NY); **Puerto Rico**, *Britton and Shafer s.n.* (NY); **Colombia**, *Smith 2859*, (NY); **Venezuela**, *Johnston 229* (NY).

REPRODUCTIVE PERIOD: Sporadically throughout year, mainly May through December.

ECOLOGY: This species grows mainly epiphytically on *Mastichodendron foetidissimum* (Jacq.) H.J. Lam. and *Calyptranthes pallens* (Poir.) Griesb. but is found occasionally growing epilithically. It is found in High Coppices.

ADDITIONAL COMMENTS: Pabst, et al. (1981) have reestablished the genus *Anacheilium* which includes this species as its type. While we agree that *Encyclia cochleata* probably more appropriately belongs in the genus *Anacheilium*, we have chosen to include it here,

since we have adopted the broader generic concept of Dressler (1961) for the purposes of this floristic study.

5. ***Encyclia cochleata*** (L.) Lemee var. ***triandra*** (Ames) Dressler, *Brittonia* **13**: 253. 1961 (Fig. 5).

Basionym: *Epidendrum cochleatum* L. var. *triandrum* Ames, *Contr. Orchid. S. Fl.* **16**, pl. 8. 1904.

Epidendrum triandrum (Ames) House, *Muhlenbergia* **I**: 129. 1906.

Anacheilium cochleatum var. *triandrum* (Ames) Small, *Man. Southeast. Fl.* **392**. 1933. Holotype: Florida, *Eaton s.n.* (AMES).

Plant epiphytic or epilithic, rhizomatous, to 50 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, elliptic to ovate, stipitate below, strongly compressed, to 12 cm long, 4 cm wide, basally enclosed by fugacious scarious sheaths, to 3-leaved at apex; leaves thinly coriaceous, elliptic to lanceolate, acute, to 20 cm long, 4 cm wide; inflorescence terminal, to 38 cm tall, flowers opening serially, peduncle slender, loosely racemose above, basally enclosed by a scarious, slender, linear-oblong, conduplicate, foliaceous sheath; raceme loosely few-flowered, to 10 non-resupinate flowers; floral bracts minute, triangular to lanceolate, acute to acuminate, concave, membranaceous, to 10 mm long, 6 mm wide; ovary pedicellate, slender, triquetrous, winged, to 3 cm long; sepals and petals green or greenish-yellow with purple blotches near the base, linear-lanceolate, subacuminate, twisted and reflexing inward, sepals to 4 cm long, 3 mm wide, petals to 3 cm long, 3 mm wide; labellum adnate to middle of column, entire, broadly orbicular to cordate, to 2 cm long, 2 cm wide, deep purple with basal portion greenish-white with radiating purple veins, disc with a yellow sulcate to ligulate callosity at base, margins undulate; column to 8 mm long, 4 mm wide, green with purple spots, erect, stout, apex 5-toothed, anthers 3, orange, central anther containing 4 pollinia, 2 smaller lateral anthers containing 2 pollinia each; capsule pendent, strongly 3-angled, broadly winged, to 4 cm long, 2.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Andros**, high coppice, near Kemp's Bay, 8 Oct. 1976, *Sauleda* 1131 (FAU), 1132 (FTG); coppice, Crow Hill, 25-27 January 1910, *Small and Carter* 8738 (AMES, F, NY, US).

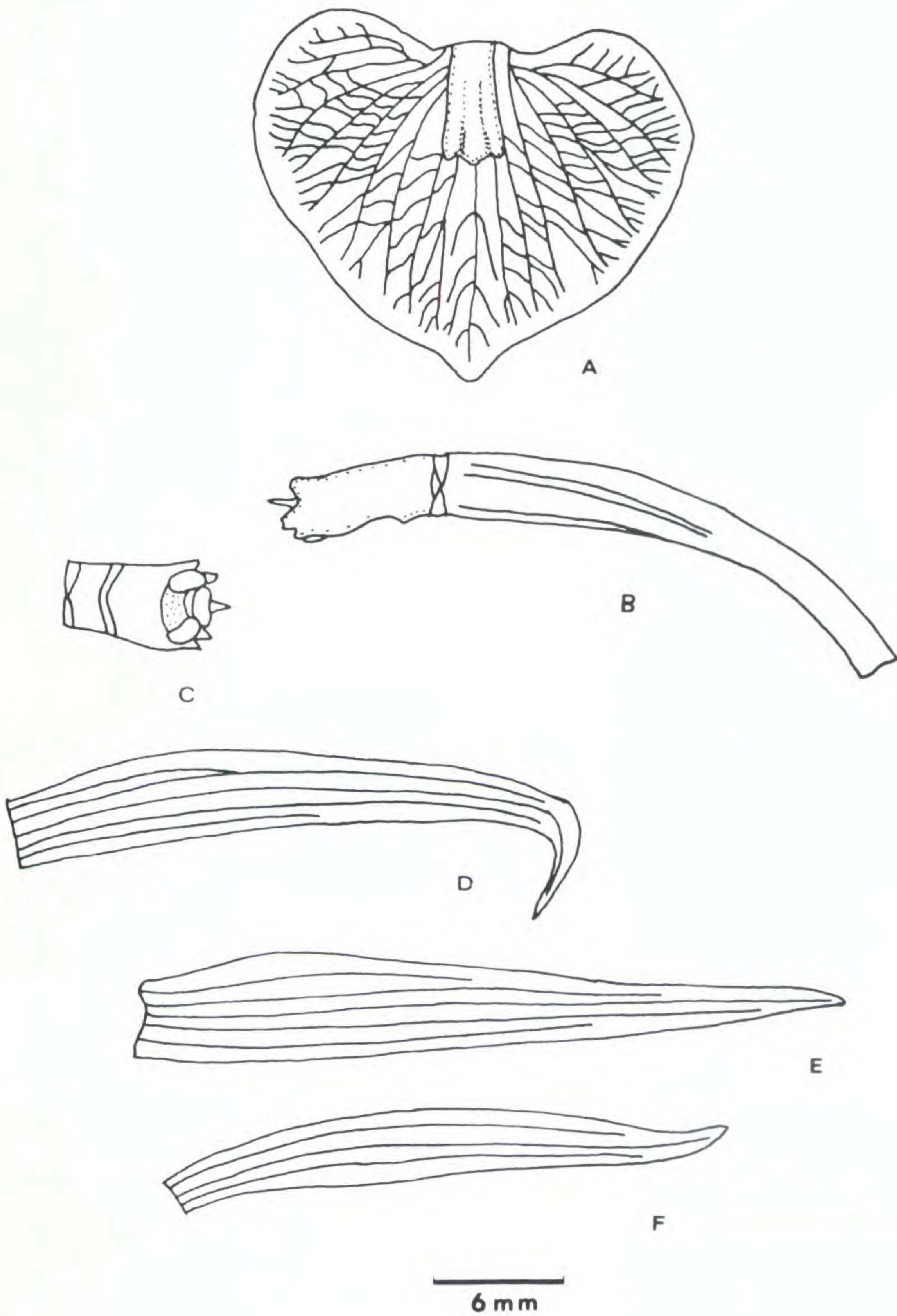


Figure 5. *Encyclia cochleata* (L.) Lemee var. *triandra* (Ames) Dressler. A. Labelum, frontal view; B. Column and ovary, lateral view; C. Column, ventral view; D. Dorsal sepal; E. Lateral sepal; F. Petal.

ADDITIONAL DISTRIBUTION: Florida, *Eaton s.n.* (AMES).

REPRODUCTIVE PERIOD: September through January.

ECOLOGY: This variety grows epiphytically on *Calyptranthes pallens* (Poir.) Griesb. and grows in High Coppices. Only one small population of this triandrous variety occurs in the Bahama Islands. All of the individuals examined in the population were triandrous and produced autogamous seed capsules. No triandrous individuals have been observed other than in this population.

6. ***Encyclia fehlingii*** (Saulea) Saulea and Adams, *Brittonia* **33**(2): 187. 1981 (Fig. 6).

Basionym: *Epidendrum fehlingii* Saulea, *Amer. Orchid Soc. Bull.* **46**(1): 32–35. 1977. TYPE: Bahama Islands, Andros, *Saulea 1028* (HOLOTYPE: AMES; ISOTYPES: FAU, NY, US, USF).

Encyclia tampensis auct. non (Lindl.) Small; Britton and Millspaugh, *Bahama Fl.* 91. 1920.

Encyclia acicularis auct. non (Batem.) Britton and Millspaugh; Britton and Millspaugh, *Bahama Fl.* 92. 1920.

Plant epiphytic or epilithic, rhizomatous, to 80 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, narrowly ovate, attenuate towards apex, to 9 cm long, 6 cm wide, basally enclosed by scarious sheaths, to 3-leaved at apex; leaves coriaceous to rigid, linear-oblong, acute, to 40 cm long, 3 cm wide; inflorescence terminal, to 71 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 50 flowers; floral bracts minute, ovate-triangular, obtuse, to 3 mm long, 3 mm wide; sepals green to greenish-yellow, rarely with brown striping toward apex, oblong to oblanceolate, acute, to 18 mm long, 5 mm wide; petals green to greenish-yellow, rarely with brown striping toward apex, obovate to oblanceolate, acute, to 17 mm long, 5 mm wide; labellum free, deeply 3-lobed, to 14 mm long, 18 mm wide, with parallel purple lines, lateral lobes narrowly triangular, obtuse, erect, midlobe rounded, emarginate, margin undulate, both sides revolute, disc at junction of lobes provided with a fleshy, plate-like callus, 3-dentate in front, lateral dents erect keels with an additional interrupted ridge on both sides, five radiating undulate lamellae in front of callus on

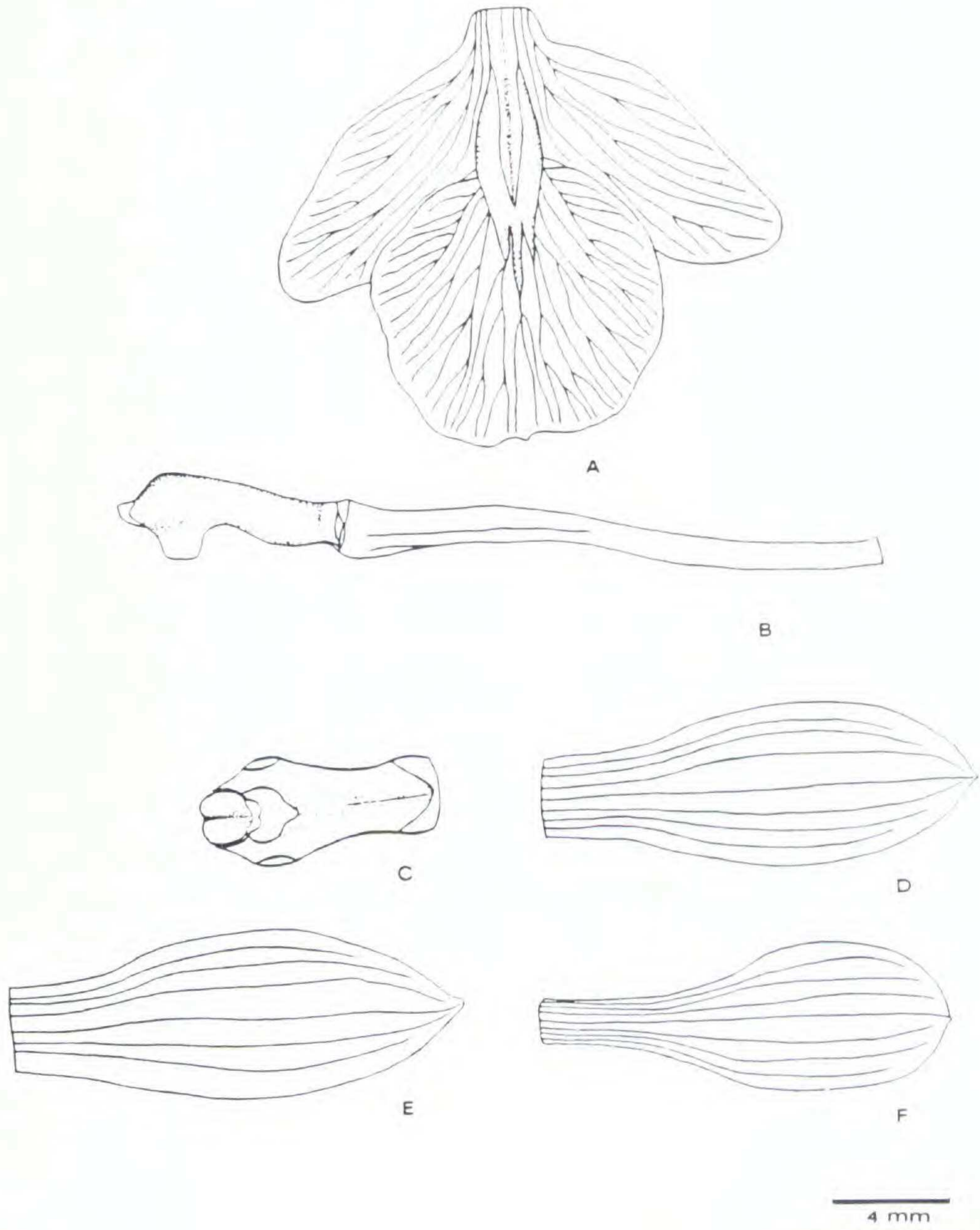


Figure 6. *Encyclia fehlingii* (Sauleda) Sauleda and Adams. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

midlobe; column white, to 10 mm long, 5 mm wide, elongate, slightly curved, with membraneous incurved rounded auricles, anther yellow; capsule pendent, to 3 cm long, 2 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, Abaco Heights, 11 April 1979, *Sauleda and Correll 2255* (FAU); Guiana Schooner Bay road, 12 April 1979, *Sauleda and Correll 2305* (FAU); Snake Cay road, 12 April 1979, *Sauleda and Correll 2313* (FAU); Boat Harbor Landing near Marsh Harbor, 6 July 1974, *Correll and Popenoe 42643* (FTG); coppice of Israel, 6 July 1974, *Correll, Popenoe and Patterson 42652* (FTG); near Sandy Point airport, 7 July 1974, *Correll and Popenoe 42706* (FTG). **Little Abaco**, low coppice, near Fox Cay settlement, 3 Aug. 1979, *Sauleda, Adams and Adams 2866* (FAU). **Andros**, Fresh Creek, on trees in coppice 1 mi NW of Love Hill settlement, 6 June 1975, *Sauleda 1025* (FTG), *1028* (AMES), *1045* (FAU); Mars Bay, 1 July 1890, *Northrop and Northrop 711* (NY); 3 mi S of Stafford Creek, 8 Oct. 1977, *Sauleda, 1982* (SEL), *1983* (NY), *1984* (K); Cedar Coppice, 7 May 1978, *Sauleda, Correll, Stevenson and Eckenwalder 2086* (FAU). **Berry Islands**, Chub Cay, low coppice, 1 mi E of airport, 21 April 1978, *Sauleda, Correll and Eckenwalder 2059* (FAU). **Grand Bahama**, coastal coppice, Golden Grove, 5–13 Feb. 1905, *Britton and Brace 2728* (NY, F). **New Providence**, Maiden Head Coppice, 24 Aug. 1904, *Britton and Brace 242* (AMES, F, NY); S of Fox Hills, 1904, *Britton and Brace 543* (NY). **Bimini Group**, South Bimini, 0.5 mi W of airport, 16 Feb. 1979, *Sauleda, Adams, Adams and Correll 2303* (FAU).

REPRODUCTIVE PERIOD: May through October.

ECOLOGY: This species grows epiphytically on *Rhizophora mangle* L., *Erythroxylum areolatum* L., *Conocarpus erectus* L., *Bucida spinosa* (Northrop) Jennings, *Acacia choriophylla* Benth., *Hypelate trifoliata* Sw., *Coccoloba diversifolia* Jacq., *Tabebuia bahamensis* (Northrop) Urban and *Psidium longipes* (Berg.) McVaugh. The habitats in which it occurs are Mangrove Forest, High Coppice and Low Coastal Coppice. Endemic.

7. **Encyclia fucata** (Lindl.) Britton and Millspaugh, Bahama Fl. 91. 1920 (Fig. 7).

Basionym: *Epidendrum fucatum* Lindl., Bot. Reg. 24: Misc. 15. 1838. HOLOTYPE: Cuba, *Sutton s.n.* (K–L, photograph seen).

Plant epiphytic or epilithic, rhizomatous, to 81 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, ovate, attenuate towards apex, to 6 cm long, 3 cm wide,

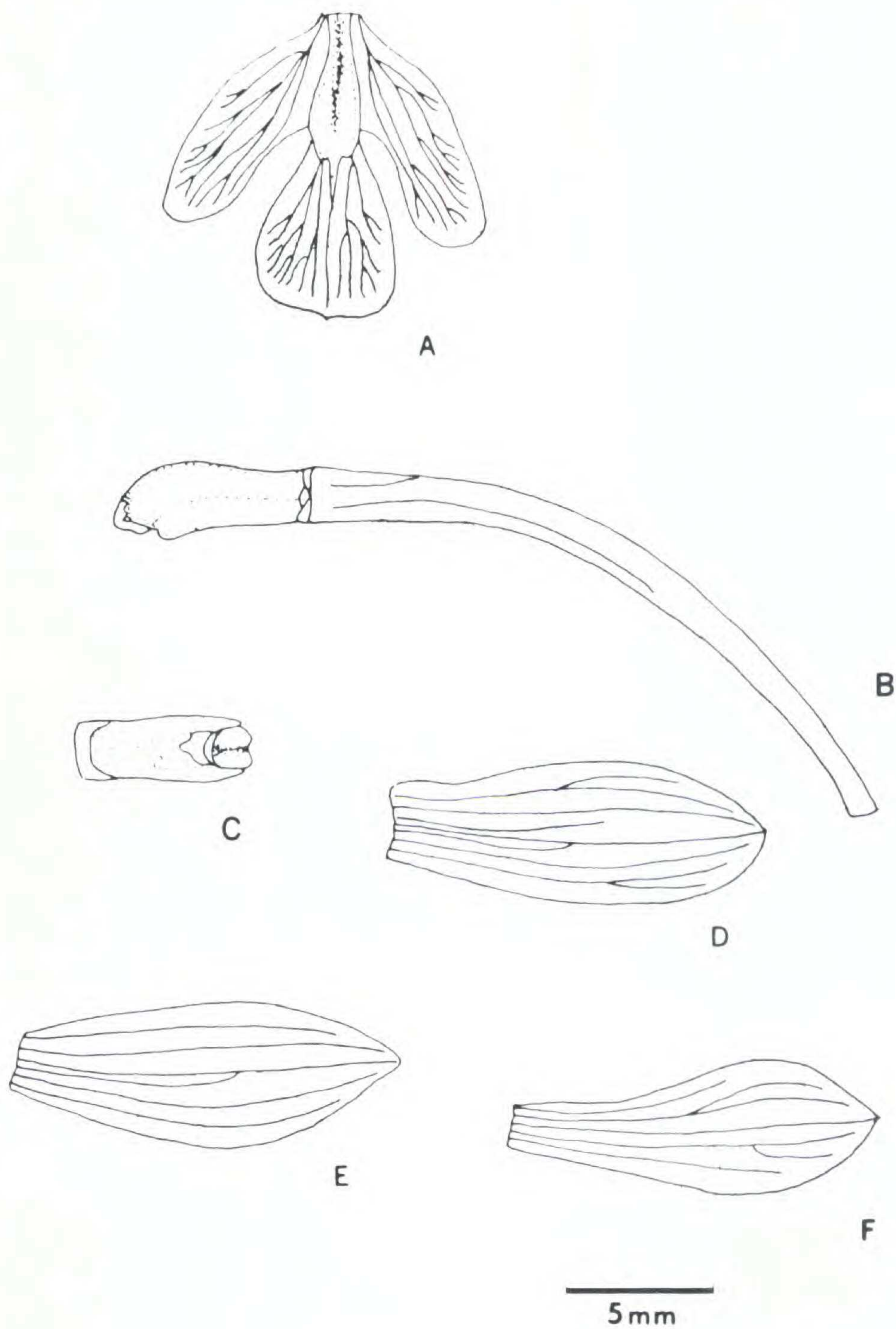


Figure 7. *Encyclia fucata* (Lindl.) Britton and Millspaugh. A. Labellum, frontal view; B. Column and ovary, lateral view; C. Column, ventral view; D. Dorsal sepal; E. Lateral sepal; F. Petal.

basally enclosed by fugacious scarious sheaths, to 3-leaved at apex; leaves coriaceous to rigid, linear-lanceolate, acute, to 30 cm long, 2 cm wide; inflorescence terminal, to 75 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 50 flowers; floral bracts minute, ovate, acuminate, to 3 mm long, 2 mm wide; ovary pedicellate, slender, to 2 cm long; sepals greenish-yellow with reddish-brown striping towards apex, oblanceolate to spatulate, acute, to 12 mm long, 3 mm wide; petals greenish-yellow with reddish-brown striping towards apex, oblong to oblanceolate, acute, to 12 mm long, 3 mm wide; labellum free, deeply 3-lobed, to 15 mm long, 10 mm wide, white to yellowish-white with radiating purple lines on lateral lobes, midlobe with a central purple spot, lateral lobes oblong to ligulate, obtuse, converging to embrace and conceal column, midlobe rounded, emarginate, margin undulate, callosity under column is two lateral erect keels joined by a third keel at junction of lobes; column white, stout, short, to 5 mm long, 3 mm wide, auricles absent, anther yellow; capsule pendent, to 13 mm long, 10 mm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, low coppice, Abaco Heights, 28 May 1979, *Saulea and Correll 2507* (USF); Snake Cay, low coppice, 12 April 1979, *Saulea and Correll 2311* (FAU); Great Cistern, 14 Dec. 1904, *Brace 1681* (F, NY). **Andros**, Driggs Hill, 10 May 1975, *Saulea 1052* (F), *1053* (F); high coppice, 6 mi NW of Love Hill settlement, 25 May 1975, *Saulea 1065* (FAU); freshwater swamp, 2 mi E of Mastic Point, 6 Nov. 1976, *Saulea 1354* (SEL); island coppice, 9 mi NW of Fresh Creek, 21 Jan. 1977, *Saulea 1540* (FAU); low coppice, 2 mi N of Love Hill settlement, 5 Feb. 1977, *Saulea 1838* (FAU); mangrove swamp, around lake 1 mi NW of Love Hill settlement, 20 March 1977, *Saulea 1878* (FAU); Conch Sound, 22 May 1890, *Northrop and Northrop 584* (AMES, F, NY); Cedar Coppice, 7 May 1978, *Saulea, Correll, Stevenson and Eckenwalder 2087* (FAU); base of rock hill, 1.5 mi N of Owens Town, 8 May 1978, *Saulea, Correll, Stevenson and Eckenwalder 2116* (FAU); high coppice, 6 mi NW Love Hill settlement, 17 May 1978, *Saulea, Correll, Austin and Adams 2121* (MO), *2122* (P), *2123* (W); island coppice, 9 mi NW Fresh Creek, 17 May 1978, *Saulea, Correll, Austin and Adams 2124* (M), *2125* (LE). **Bimini Group**, **South Bimini**, along runway, 16 Feb. 1979, *Saulea, Adams, Adams and Correll 2201* (FAU). **Grand Bahama**, John Hill Creek, 16 April–8 May 1905, *Brace 3713* (F, NY).

ADDITIONAL DISTRIBUTION: **Cuba**, *Jack 7991* (NY), Isle of Pines, *Taylor 80* (NY).

REPRODUCTIVE PERIOD: April through September.

ECOLOGY: This species grows epiphytically on *Coccoloba diversifolia* Jacq., *Manilkara bahamensis* (Baker) Lam. & Meese, *Savia bahamensis* Britton, *Conocarpus erectus* L., *Rhizophora mangle* L.

Erythroxyllum areolatum L., *Calyptranthes pallens* (Poir.) Griesb., *Ateramnus lucidus* (Sw.) Rothm., *Nectandra coriacea* (Sw.) Griesb., *Annona glabra* L., and *Chrysobalanus icaco* L. The habitats within which this species is found are High Coppice, Low Coastal Coppice, Mangrove Forest, and Freshwater Swamp.

8. ***Encyclia gracilis*** (Lindl.) Schltr., Die Orchideen, 209. 1915 (Fig. 8).

Basionym: *Epidendrum gracile* Lindl., Bot. Reg. 21:pl.1765. 1835. HOLOTYPE: Bahamas, Lees *s.n.* (K-L, photograph seen).

Encyclia diurna auct. non (Jacq.) Britton & Millspaugh; Britton & Millspaugh, Bahama Fl. 92. 1920.

Epidendrum altissimum auct. non Batem. ex Lindl.; Britton & Millspaugh, Bahama Fl. 92. 1920.

Epidendrum virens auct. non Lindl.; Britton & Millspaugh, Bahama Fl. 92. 1920.

Plant predominantly epilithic, rarely epiphytic, rhizomatous, to 150 cm tall; roots many, thick, canescent; primary stem or rhizome short, stout, creeping, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect, clustered, elongated, ovate to subulate, to 10 cm long, 5 cm thick, basally enclosed by scarious sheaths, to 4-leaved at apex; leaves coriaceous, stiff, erect, linear to linear-lanceolate, acute, to 35 cm long, 4 cm wide, leaf base with pseudobulbous bulges and lacking abscission layer; inflorescence terminal, to 130 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 45 flowers; floral bracts ovate-triangular, acute, concave, to 5 mm long, 5 mm wide; ovary pedicellate, slender, to 2.4 cm long; sepals yellowish-orange with brown striping, elliptic to oblong, acute, to 2.2 cm long, 6 mm wide; petals yellowish-orange with reddish-brown striping toward apex, obovate to spatulate, acute to obtuse, to 2.0 cm long, 5 mm wide; labellum free, deeply 3-lobed, to 2.2 cm long, 2.4 cm wide, white with radiating purple lines on lobes, lateral lobes oblong, obtuse, erect, embracing column, midlobe rounded, emarginate, margin undulate, callosity under column is two lateral erect keels joining at junction of lobes; column white to yellowish-white, streaked with purple, elongate, to 10 mm long, 5 mm wide, with membranaceous incurved rounded auricles, anther yellow; capsule pendent, to 2.5 cm long, 1.5 cm thick.

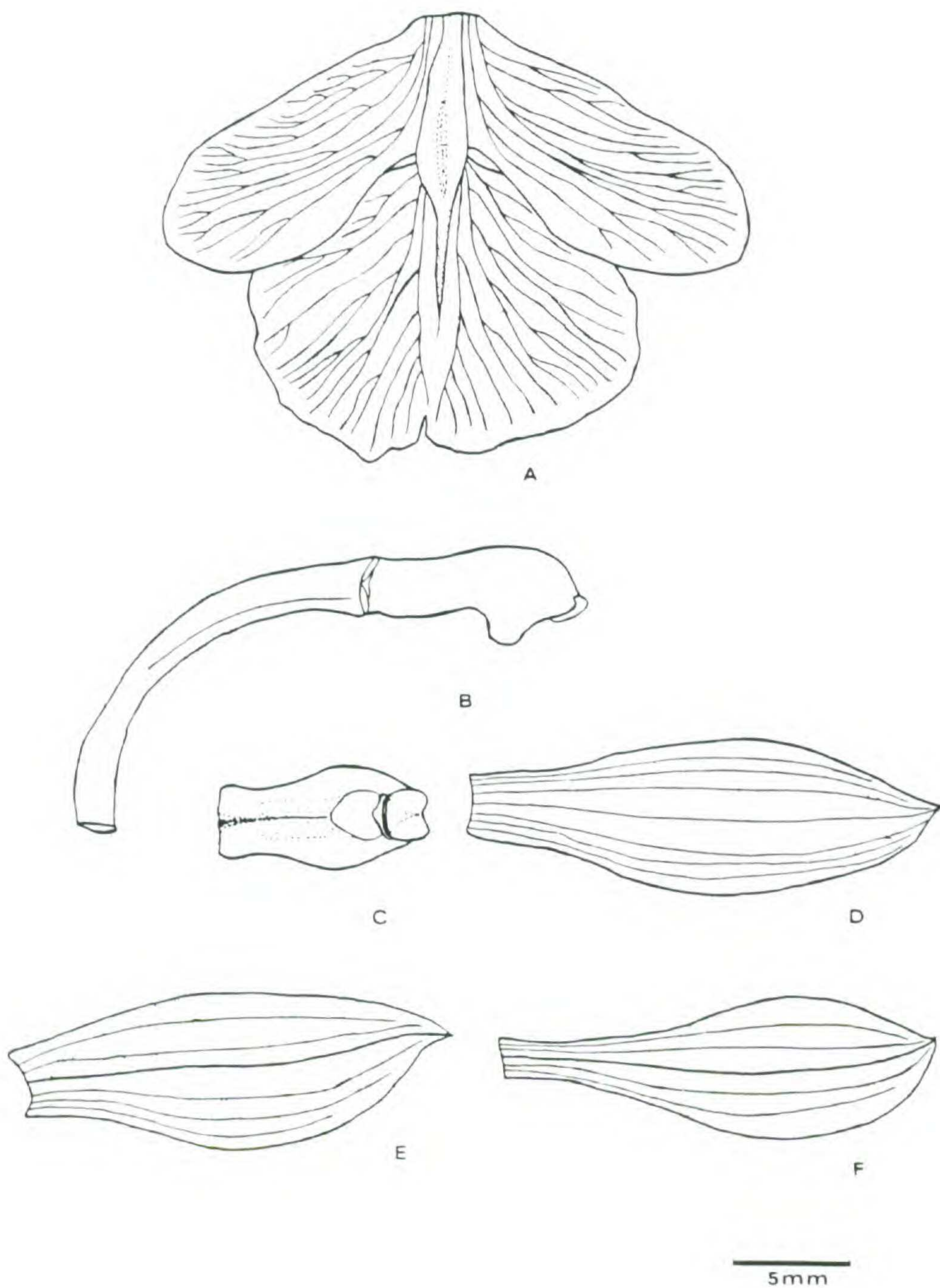


Figure 8. *Encyclia gracilis* (Lindl.) Schltr. **A**. Labellum, frontal view; **B**. Column and ovary, lateral view; **C**. Column, ventral view; **D**. Dorsal sepal; **E**. Lateral sepal; **F**. Petal.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, Abaco Heights, low coppice, 11 April 1979, *Sauleda and Correll* 2258 (FAU); Snake Cay, low coppice, 12 April 1979, *Sauleda and Correll* 2312 (FAU); coastal coppice near Treasure Cay, 6 July 1974, *Correll, Popenoe and Patterson* 42668-A (FTG); Guana Bight, 1 July 1948, *McSwinnery s.n.* (AMES). **Andros**, rock scrub, 9.5 mi S of Fresh Creek, 15 Oct. 1976, *Sauleda* 1138 (FAU); rock scrub, 8 mi S of Fresh Creek, 15 Oct. 1976, *Sauleda* 1139 (SEL), 1140 (FTG), 1141 (P), 1146 (AMES), 1147 (NY), 1149 (FAU), 1151 (S), 1153 (W), 1154 (K), 1155 (F), 1156 (F), 1157 (US), 1158 (MO); island coppice, 9 mi NW of Fresh Creek, 21 Jan. 1977, *Sauleda* 1531 (FAU); low coppice, 2 mi N of Love Hill settlement, 16 April 1977, *Sauleda* 1866 (FAU); rock scrub, 9 mi S of Fresh Creek, 16 April 1977, *Sauleda* 1867 (FAU); Cedar Coppice, 7 May 1978, *Sauleda, Correll, Stevenson and Eckenwalder* 2088 (FAU); mangrove swamp, 6 Nov. 1976, *Adams* 2002 (FAU); Deep Creek, 17 Aug.–10 Sept. 1906, *Brace* 5149 (AMES, F, NY, US); Bigwood Cay, 12 July 1975, *Hill* 3406 (FTG); Mangrove Cay, near Moxey Town, 8 Aug. 1979, *Sauleda* 2879 (FAU). **Eleuthera**, Silver Palm coppice area, 11 Aug. 1977, *Correll and Correll* 48926 (FTG); along roadside at Deep Creek, 4 June 1979, *Sauleda* 2709 (FAU). **Cat Island**, dunes, 2.5 mi E of airport, 21 Jan. 1979, *Sauleda and Correll* 2194 (FAU). **Crooked Island**, Turtle Sound Landing, 5 June 1977, *Correll and Proctor* 48733 (FTG). **Exuma Chain**, Norman's Cay, near airport, 18 Jan. 1979, *Sauleda and Correll* 2180 (FAU); Ship Channel Cay, 17 Feb. 1905, *Britton and Millspaugh* 2749 (NY). **Grand Bahama**, Eight Mile Rocks, 16 April–8 May 1905, *Brace* 3735 (NY, US); Freeport, west end of airstrip, 25 May 1975, *Correll, Popenoe and Fluck* 45444 (FTG). **Great Inagua**, Blakes Wells, 24 June 1978, *Sauleda, Adams, Adams and Correll* 2143 (FAU). **Long Island**, Moss Hill, 7–17 Dec. 1905, *Brace* 4237 (NY). **New Providence**, White Lands race course, 26 Aug. 1904, *Britton and Brace* 280 (AMES, F, MO, NY, US); south of Fox Hills, 5 Sept. 1904, *Britton and Brace* 536 (F, NY), 5 Sept. 1904, *Britton and Brace* 544 (NY).

DISTRIBUTION IN THE TURKS AND CAICOS ISLANDS: **Middle Caicos**, on road between Nango and Free Town, *Sauleda, Adams and Correll* 2032 (FAU), 2033 (FAU).

REPRODUCTIVE PERIOD: June through November.

ECOLOGY: This species is found growing mainly epilithically on Pleistocene limestone and occasionally epiphytically at the base of *Ateramnus lucidus* (Sw.) Rothm., *Buxus bahamensis* Baker, and *Strumpfia maritima* Jacq. The habitats in which it is found are Beach and Dune, Coastal Rock Scrub, Low Coastal Coppice, Inland Scrub, and in open sunny disturbed areas in High Coppice. Endemic.

9. *Encyclia hodgeana* (Hawkes) Beckner, *Phytologia* 20: 217. 1970 (Fig. 9).

Basionym: *Epidendrum altissimum* Batem. ex Lindl., Bot.

Reg. 24: Misc. 38, 1838, non Jacq. 1760.

Epidendrum hodgeanum Hawkes, *Orquidea* 18: 176. 1956.

Encyclia altissima (Batem. ex Lindl.) Schltr., Die Orchideen 207. 1915.

HOLOTYPE: Bahamas, *Skinner s.n.* (K-L, photograph seen).

Encyclia diurna auct. non (Jacq.) Britton & Millspaugh; Britton & Millspaugh, Bahama Fl. 92. 1920.

Epidendrum gracile auct. non Lindl.; Britton & Millspaugh, Bahama Fl. 92. 1920.

Epidendrum virens auct. non Lindl.; Britton & Millspaugh, Bahama Fl. 92. 1920.

Plant epiphytic or epilithic, rhizomatous, to 245 cm tall; roots many, slender to thick, velamentous or canescent; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect, clustered, elongated, linear-lanceolate to lanceolate, attenuate, to 60 cm long, 8 cm thick, enclosed by scarious imbricating sheaths, to 4-leaved at apex; leaves coriaceous to rigid, linear to linear-lanceolate, acute, to 60 cm long, 3.5 cm wide; inflorescence terminal, to 185 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 40 flowers; floral bracts ovate-triangular, acute, to 3 mm long, 3 mm wide; ovary pedicellate, slender, to 2.5 cm long; sepals greenish-tan with dark brown striping, elliptic, acute, to 2.2 cm long, 7 mm wide; petals greenish-tan with reddish-brown striping towards apex, oblanceolate, acute, to 2.2 cm long, 4 mm wide; labellum free, deeply 3-lobed, to 2.8 cm long, 2.2 cm wide, lateral lobes yellow with radiating purple lines, oblong, obtuse, erect, embracing column, midlobe white with yellow undulating margin, marked with purple radiating lines, callosity under column is two lateral erect keels joining at midlobe, two undulate lamellae parallel keel on midlobe; column white, streaked with purple, elongate, to 1.8 cm long, 5 mm wide, with membranaceous incurved rounded auricles, anther yellow; capsule pendent, to 2.5 cm long, 2.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, edge of high coppice, 3.1 mi N Treasure Cay airport, 3 Aug. 1979, *Sauleda, Adams and Adams 2839* (FAU); Snake Cay, low coppice, 12 April 1979, *Sauleda and Correll 2310* (FAU); Cherokee Sound, 29 Dec. 1904, *Brace 1936* (F, NY); coppice, Cherokee settlement, 31 Dec. 1904 *Brace 1992* (NY). **Acklin's Island**, Spring Point, 21 Dec. – 6 Jan. 1906, *Brace 4315* (AMES, F). **Andros**, rock scrub, 8 mi S of Fresh Creek, 21 Jan. 1977, *Sauleda 1516* (SEL), *1519* (F), *1521* (S); island coppice, 9 mi NW of Fresh Creek, 21 Jan. 1977, *Sauleda 1523* (FAU); rock scrub, 9 mi S of Fresh Creek, 21 Jan. 1977, *Sauleda 1538* (FAU); low coppice, 2 mi N of Love Hill settlement, 5 Feb. 1977,

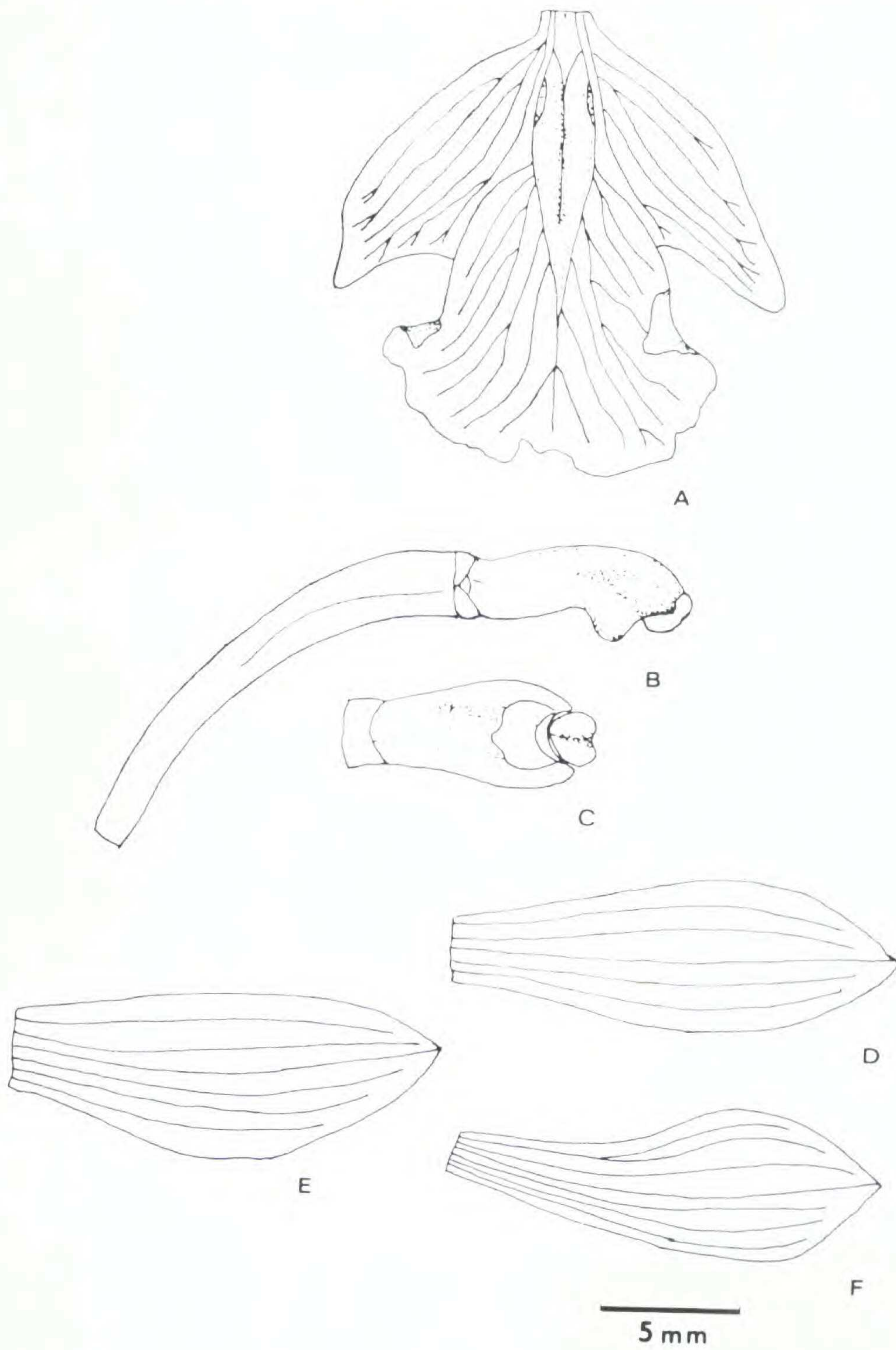


Figure 9. *Encyclia hodgeana* (Hawkes) Beckner. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

Saulea 1833 (FAU); 3 mi N of Cargil Creek, 7 March 1966, *Dawson* 26749 (US); Deep Creek, 20–22 Jan. 1910, *Small and Carter* 8542 (AMES, F, NY); Mangrove Cove, between airport and Moxey Town, 22 July 1978, *Saulea and Correll* 2144 (FAU). **Cat Island**, low coppice, 2 mi. S of Stevenson, 19 Jan. 1977, *Saulea, Correll and Correll* 2183 (FAU); the Bight and vicinity, 22–23 Nov. 1907, *Wilson* 7181 (F, MO, NY). **Crooked Island**, Landrail Point, 9–23 Jan. 1906, *Brace* 4527 (AMES, F, NY). **Eleuthera**, along roadside at Deep Creek, 4 June 1979, *Saulea* 2708 (FAU); low coppice, 3 mi N of Gregory Town, 2 June 1979, *Saulea* 2652 (FAU); White Lands, 18 Feb. 1907, *Britton and Millspaugh* 5421 (F, NY). **Exuma Chain**, Ship Channel Cay, 17 Feb. 1905, *Britton and Millspaugh* 2759 (F, NY); cay N of Wide Opening, 18 Feb. 1905, *Britton and Millspaugh* 2770 (F, NY, US); Great Exuma, W of Goat Key, 17 Jan. 1979, *Saulea, Correll and Correll* 2173 (FAU); on ground, low coppice, near Rolletown, 27–28 Feb. 1905, *Britton and Millspaugh* 3073 (F, NY); Orchid Heights, Hummingbird Cay, 12 Jan. 1970, *Edge and Swain* 3240 (MO); Culmer's Cay, 14 Jan. 1970, *Nickerson and Case* 3251 (MO); Norman's Cay, near runway, 18 Jan. 1979, *Saulea and Correll* 2177 (FAU); Staniel Cay, near airport, 18 Jan. 1979, *Saulea and Correll* 2181 (FAU). **Inagua Group**, Great Inagua, along runway, 23 June 1978, *Saulea, Adams, Adams and Correll* 2136 (FAU); along airport road, 31 Dec. 1961, *Dunbar* 28 (AMES); Little Inagua, SW sector, 12–16 Aug. 1975, *Correll* 46009 (FTG). **Long Island**, 2 mi S of Clarence Town, 20 Jan. 1979, *Saulea and Correll* 2189 (FAU); road to south side, 7–17 Dec. 1905, *Brace* 4046 (AMES, F, US). **Mayaguana**, Abraham Bay, 10–12 Dec. 1907, *Wilson* 7478 (F, NY); Southeast Point, 6–8 Dec. 1907, *Wilson* 7589 (F, NY). **New Providence**, low coppice S of Fox Hills, 5 Sept. 1904, *Britton and Brace* 548 (NY); coppice, Molf Road, 26 Jan. 1905, *Britton and Millspaugh* 2107 (F, NY); Soldier's Road, 25 Jan. 1905, *Millspaugh* 2485 (F, NY); 1 mi S of Fox Hills, 18 Jan. 1905, *Wight* 2 (AMES); 3 mi SE of Nassau, 19 March 1905, *Wight* 344 (AMES). **Rum Cay**, near Port Nelson, 4 Dec. 1905, *Brace* 3973 (AMES, F, NY, US). **San Salvador**, Graham's Harbor, 26 Nov. 1907, *Wilson* 7251 (US, NY).

DISTRIBUTION IN THE TURKS AND CAICOS ISLANDS: **Middle Caicos**, along road between Free Town and Nango Town, 11 Feb. 1978, *Saulea, Adams and Correll* 2039 (K), 2040 (BR), 2041 (W), 2042 (MO), 2043 (M). **North Caicos**, road to Whitby, 13 Feb. 1978, *Saulea, Adams, Adams, and Correll* 2048 (FAU).

ADDITIONAL DISTRIBUTION: **Haiti**, *Leonard and Leonard* 12773 (NY).

REPRODUCTIVE PERIOD: November through March.

ECOLOGY: This species grows epilithically on Pleistocene limestone and epiphytically on *Byrsonima cuneata* (Turez) P. Wilson, *Buxus bahamensis* Baker, *Psidium longipes* (Berg) McVaugh, *Ateramnus lucidus* (Sw.) Rothm., *Juniperus bermudiana* L., *Thovinia discolor* Griesb., *Gochnatia ilicifolia* Less, *Tabebuia bahamensis* (Northrop) Britton, *Coccoloba diversifolia* Jacq., *Savia bahamensis* Britton, and *Coccothrinax argentata* (Jacq.) L.H. Bailey. The habitats in which it is found are Coastal Rock Scrub, Low Coastal Coppice, Inland Scrub, and High Coppice.

10. ***Encyclia inaguensis*** Nash ex Britton and Millspaugh, Bahama Fl. 92. 1920 (Fig. 10).

TYPE: On trees and shrubs, between Northwest and Southwest Point, Little Inagua, 21 October 1904, *Nash and Taylor 1251* (HOLOTYPE: NY; ISOTYPES: AMES, F).

Plant epiphytic or epilithic, rhizomatous, to 175 cm tall; roots many, slender to thick, velamentous or canescent; primary stem or rhizome short, stout, creeping, usually ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect, clustered, elongated, attenuate, linear-lanceolate, to 31 cm long, 3.5 cm thick, enclosed by scarious imbricating sheaths, to 2-leaved at apex; leaves coriaceous to rigid, linear, acute, to 55 cm long, 1.8 cm wide; inflorescence terminal, to 144 cm tall, peduncle slender, erect, distantly several-sheathed, paniculate above, lateral branches ascending, to 45 flowers; floral bract ovate-triangular, acute, to 8 mm long, 8 mm wide; ovary pedicellate, slender, to 3 cm long; sepals green to greenish-tan with brown to reddish-brown striping, elliptic to oblanceolate, acute, to 1.7 cm long, 7 mm wide; petals green to greenish-tan with brown to reddish-brown striping, oblanceolate, acute, to 2 cm long, 5 mm wide; labellum free, deeply 3-lobed, to 1.9 cm long, 2.0 cm wide, lateral lobes yellow with radiating purple lines, oblong, subacute, erect, embracing column, midlobe yellow to yellowish-green, center of disc marked with purple radiating lines, margin undulate, callosity under column composed of two dents decurrent in erect keels joining at midlobe, purple; column white, streaked with purple, elongate, to 1.8 cm long, 5 mm wide with membranous, incurved, rounded auricles, anther yellow; capsule pendent, to 3.0 cm long, 2.2 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Little Inagua**, along trail from western shore to Royal Palm sinkholes, 16 July 1976, *Correll 47348* (FTG); between Northwest and Southwest Point, 21 October 1904, *Nash and Taylor 1251* (AMES, F, NY), *1255* (NY).

DISTRIBUTION IN THE TURKS AND CAICOS ISLANDS: **Providenciales**, between Five Cays and Blue Hills, 11 July 1954, *Proctor 9149* (AMES). **Middle Caicos**, along road between Free Town and Nango town, 11 Feb. 1978, *Sauleda, Adams and Correll 2035* (NY), *2036* (FAU), *2037* (US), *2038* (K). **North Caicos**, along road at Bellfield Landing, 12 Feb. 1978, *Sauleda, Adams, Adams and Correll 2050* (FAU); James Hill, 12 Feb. 1978, *Sauleda, Adams, Adams and Correll 2053* (AMES, F, FAU).

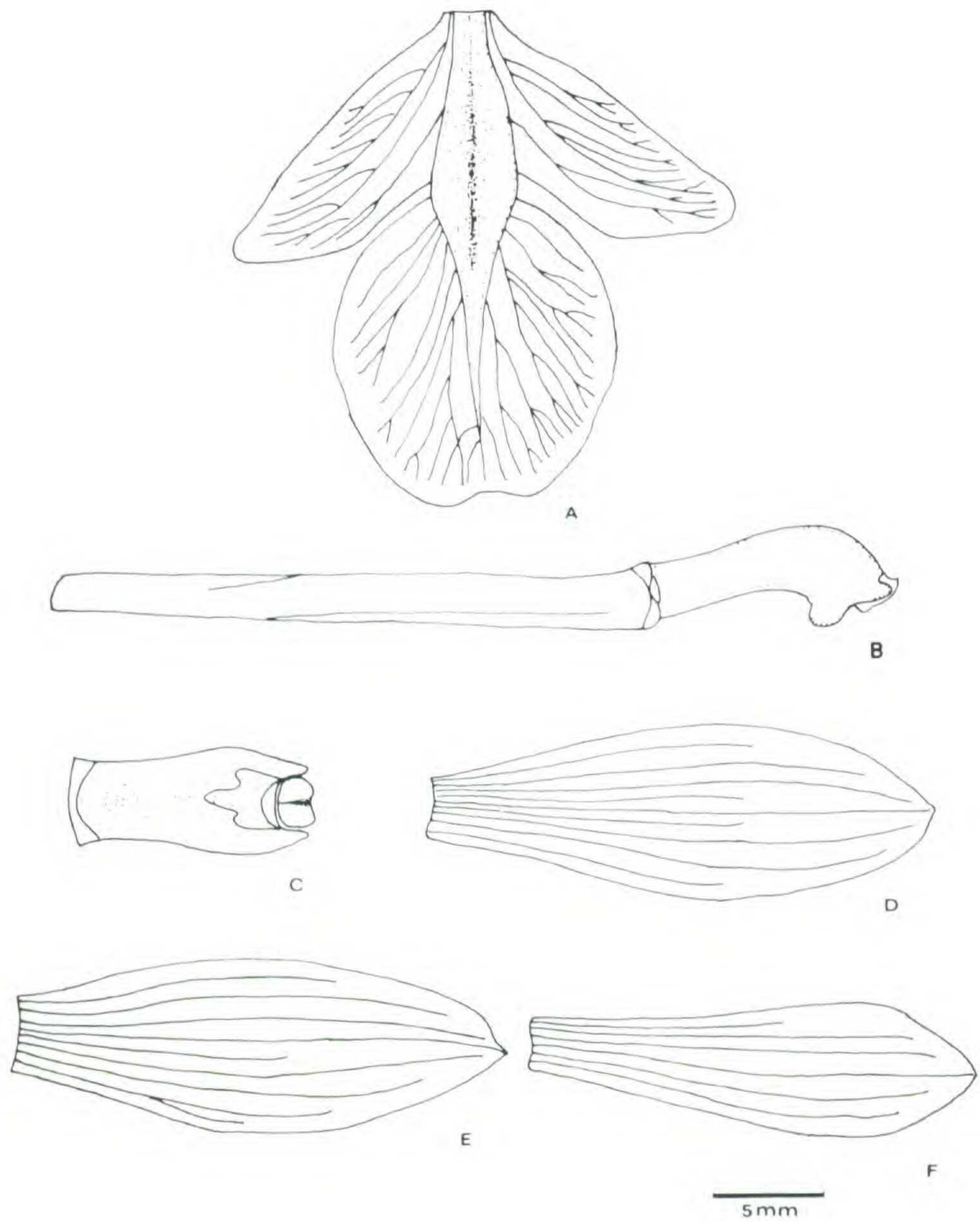


Figure 10. *Encyclia inaguensis* Nash ex Britton and Millspaugh. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

REPRODUCTIVE PERIOD: July through October.

ECOLOGY: On Little Inagua and the Caicos Group this species is found growing epilithically and occasionally epiphytically on *Leucaena leucocephala* (Lam.) DeWit and *Ateramnus lucidus* (Sw.) Rothm. The habitats in which it is found are Coastal Rock Scrub and Low Coastal Coppice. Endemic.

ADDITIONAL COMMENTS: *Encyclia inaguensis* is similar to and may be confused with immature or nonreproductive plants of *Encyclia hodgeana* (Hawkes) Beckner. *Encyclia inaguensis* usually has a single leaf which is distinctly narrower. Florally, these two species differ significantly in the shape of the midlobe of the labelum. In *E. hodgeana* the disc is flattened while in *E. inaguensis* the lateral edges are reflexed.

11. ***Encyclia plicata*** (Lindl.) Britton & Millspaugh, Bahama Fl. 92. 1920 (Fig. 11).

Basionym: *Epidendrum plicatum* Lindl., Bot. Reg. 33:pl. 35. 1847. Holotype: Cuba, *Loddiges s.n.* (K-L, photograph seen).

Plant epiphytic or epilithic, rhizomatous, to 75 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, ovate, attenuate toward apex, to 6 cm long, 4 cm wide, enclosed by scarious sheaths, to 3-leaved at apex; leaves coriaceous to rigid, erect, linear to linear-lanceolate, acute, to 35 cm long, 2.4 cm wide; inflorescence terminal, to 69 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 30 flowers; floral bracts ovate-triangular, acute to 3 mm long, 4 mm wide; ovary pedicellate, slender, to 2.4 cm long; sepals green, yellow, or brownish-orange, usually with reddish-brown suffusion, elliptic to linear-lanceolate, to 2.5 cm long, 1 cm wide; petals green, yellow or brownish-orange, usually with reddish-brown striping toward apex, oblanceolate to spatulate, acute to acuminate, to 2.2 cm long, 8 mm wide; labellum free, deeply 3-lobed, to 3 cm long, 3 cm wide, white to purple with reddish-purple radiating lines on lobes, lateral lobes, narrowly triangular, obtuse, erect, converging to embrace and conceal column, midlobe cordate to suborbicular, emarginate,

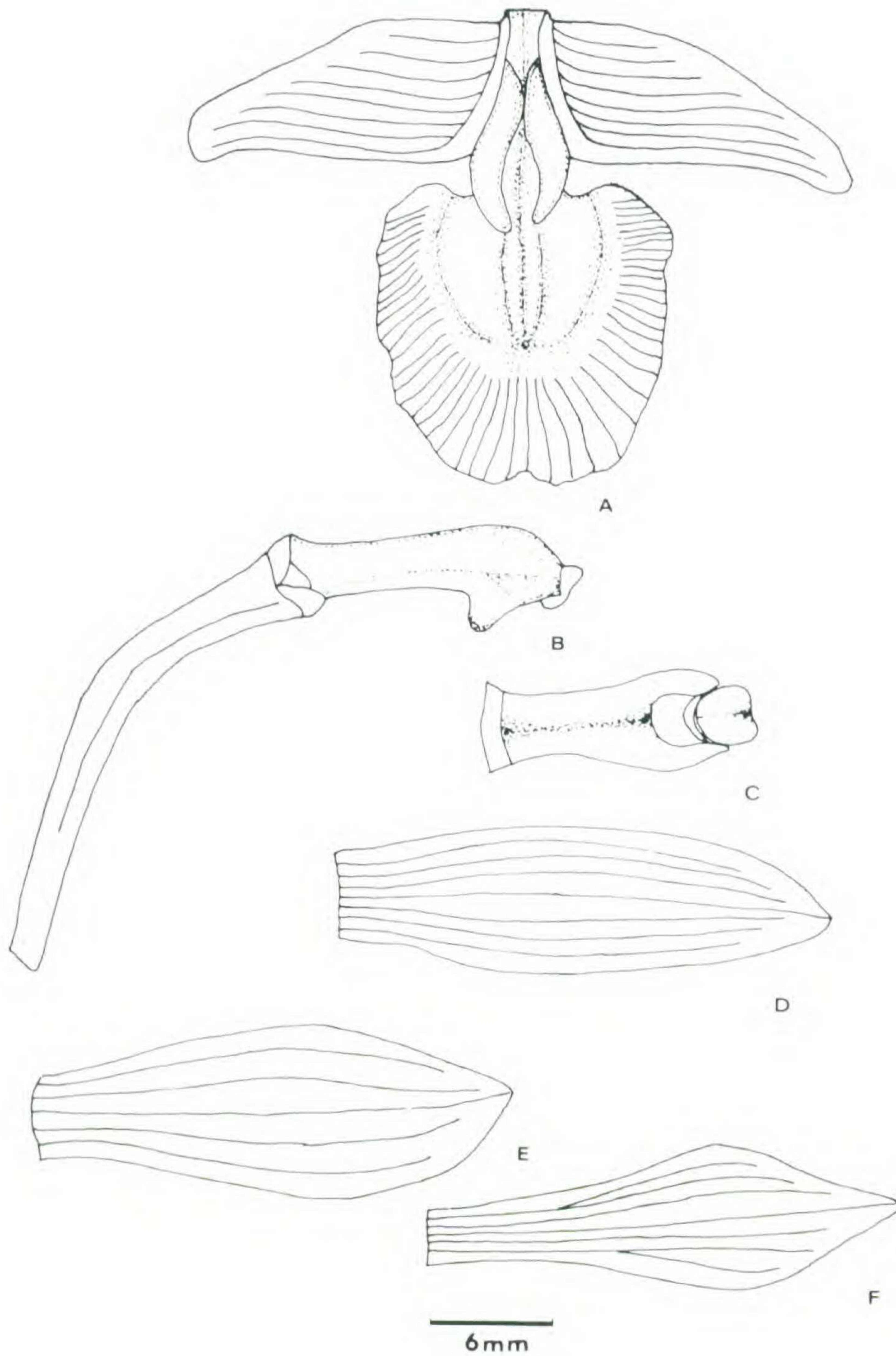


Figure 11. *Encyclia plicata* (Lindl.) Britton and Millspaugh. **A**. Labellum, frontal view; **B**. Column and ovary, lateral view; **C**. Column, ventral view; **D**. Dorsal sepal; **E**. Lateral sepal; **F**. Petal.

usually reflexed or strongly pleated, margin undulate, with two fleshy pads spreading from base of disc, callosity under column is two thick fleshy lateral erect keels terminating at base of disc in two tubercles; column white or purple, elongate, to 1.4 cm long, 6 mm wide, with membranaceous, incurved pointed auricles, anther white or purple; capsule pendent, to 4 cm long, 2.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, W of Treasure Cay, 6 July 1974, *Correll, Popenoe and Patterson* 42688 (FTG). **Andros**, low coppice, N of Fresh Creek, 10 May 1975, *Sauleda* 1033 (AMES), 1056 (SEL); mangrove around lake 1 mi NW of Love Hill settlement, 15 Oct. 1976, *Sauleda* 1167 (K), 1168 (F); island coppice, 9 mi NW of Fresh Creek, 21 Jan. 1977, *Sauleda* 1532 (FAU); high coppice, 6 mi NW of Fresh Creek, 16 April 1977, *Sauleda* 1884 (FAU); Mangrove Cay, 18 Aug.—10 Sept. 1906, *Brace* 4919 (AMES, NY); Bearing Point, 18 Aug.—10 Sept. 1906, *Brace* 5315 (NY); Fresh Creek, 11 June 1890, *Northrop and Northrop* 609 (AMES, F, NY); Deep Creek, 20—22 Jan. 1910, *Small and Carter* 8541 (F, NY). **New Providence**, on *Annona*, swamp, Clifton, 13 Sept. 1904, *Britton and Brace* 752 (NY).

ADDITIONAL DISTRIBUTION: **Cuba**, *Leon* 14964 (NY).

REPRODUCTIVE PERIOD: May through September.

ECOLOGY: This species is found growing occasionally epilithically on Pleistocene limestone and mainly epiphytically on *Erythroxylum areolatum* L., *Ateramnus lucidus* (Sw.) Rothm., *Tabebuia bahamensis* (Northrop) Britton, *Petitia domingensis* Jacq., *Picramnia pentandra* Sw., *Bourreria ovata* Miers, *Randia acuteata* L., *Zanthoxylum coriaceum* A. Rich., *Coccoloba northropiae* Britton, *Schaefferia frutescens* Jacq., *Casearia bahamensis* Urban, *Savia bahamensis* Britton, *Tetrazygia bicolor* (Mills.) Cogn., *Manilkara bahamensis* (Baker) Lam. & Meese, *Crossopetalum rhacoma* (Sw.) Hitchc., *Psidium longipes* (Berg) McVaugh, *Juniperus bermudiana* L., *Terebraria resinosa* (Vahl.) Sprague, *Coccoloba diversifolia* Jacq., *Rhizophora mangle* L., *Coccoloba tenuifolia* L., *Lysiloma latisiliqua* (L.) Benth., *Acacia choriophylla* Benth., *Calyptranthes zuzygium* (L.) Sw., and *Hypelate trifoliata* Sw. The habitats in which it is found are Low Coastal Coppice, Mangrove Forest, and High Coppice.

12. ***Encyclia rufa*** (Lindl.) Britton & Millspaugh, Bahama Fl. 91. 1920 (Fig. 12).

Basionym: *Epidendrum rufum* Lindl., Bot. Reg. 31: Misc. 33.

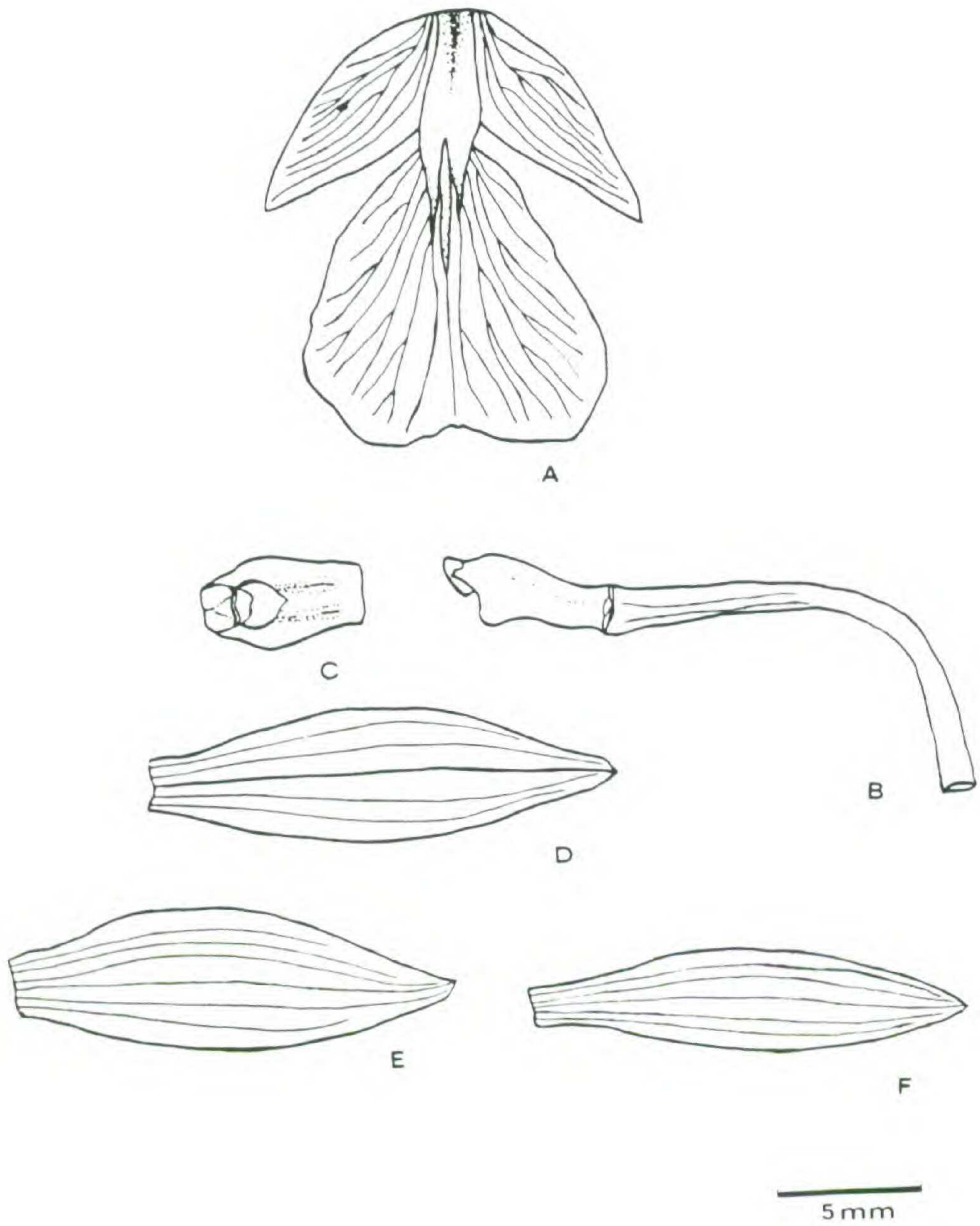


Figure 12. *Encyclia rufa* (Lindl.) Britton and Millspaugh. **A**. Labellum, frontal view; **B**. Column and ovary, lateral view; **C**. Column, ventral view; **D**. Dorsal sepal; **E**. Lateral sepal; **F**. Petal.

1845. Holotype: Brazil, *Turner s.n.* (K-L, photograph seen).

Epidendrum bahamense Griesb., Fl. Br. W.I. 614. 1864.

Encyclia bahamensis (Griesb.) Britton & Millspaugh, Bahama Fl. 91. 1920.

Holotype: Bahamas, *Swains s.n.* (K, photograph seen).

Epidendrum primulinum Batem. ex Lindl., in Paxton's Fl. Gard. 1: 151. 1853.

Holotype: Mexico, *no collector* (K-L, photograph seen).

Epidendrum odoratissimum auct. non Lindl.; Northrop, Mem. Tor. Bot. Cl. 12: 29. 1902.

Plant epiphytic or epilithic, rhizomatous, to 90 cm tall; roots numerous, slender, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, ovate, attenuate toward apex, to 12 cm long, 7 cm wide, enclosed by scarious sheaths, to 3-leaved at apex; leaves coriaceous to rigid, linear to linear-lanceolate, acute, to 36 cm long, 2.5 cm wide; inflorescence terminal, to 78 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, lateral branches stiff and erect, to 50 flowers; floral bracts ovate-triangular, acute, concave, to 2 mm long, 3 mm wide; ovary pedicellate, slender, to 2 cm long, sepals green to yellow, occasionally with reddish-brown suffusion, glossy, obovate to oblanceolate, acute, to 1.8 cm long, 6 mm wide; petals green to yellow, occasionally with reddish-brown striping toward apex, glossy, elliptic to oblanceolate, acute, to 1.8 cm long, 5 mm wide; labellum free, 3-lobed, to 1.8 cm long, 1.6 cm wide, green or yellow, occasionally yellow or white with radiating purple lines, lateral lobes oblong, obtuse, erect, embracing column, midlobe round to obovate, emarginate or apiculate, recurved. lateral margins revolute, callosity under column is two lateral erect keels occasionally joined by a third keel at junction of lobes; column white or green, occasionally streaked with purple, short, to 6 mm long, 4 mm wide, with membranaceous square auricles, anther white; capsule pendent, to 2.5 cm long, 2.0 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, 3.1 mi N of Treasure Cay airport, 3 Aug. 1979, *Sauleda, Adams and Adams 2841* (FAU); Eight Mile Bay, 26 Dec. 1904, *Brace 1875* (F, NY); Cherokee Sound, 28 Dec. 1904, *Brace 1906* (F, NY). **Little Abaco**, near Fox Cay settlement, 3 Aug. 1979, *Sauleda, Adams and Adams 2865* (FAU). **Andros**, low coppice, on west bank of Stafford Creek, 15 Oct. 1976, *Sauleda 1137* (FAU); island coppice, 9 mi NW of Fresh Creek, 16 April 1977,

Saulea 1853 (S), 1854 (F), 1855 (K), 1856 (LE), 1857 (W), 1858 (MO), 1859 (P); palm forest, 12 mi W of Fresh Creek, 16 April 1979, *Saulea* 1885 (FAU); Calabash Bay, 6 June 1890, *Northrop and Northrop* 606 (F, NY); near Staniard Creek, 1–2 Feb. 1910, *Small and Carter* 8892 (NY, US). **Bimini Group**, Easter Key, May, 1948, *Howard and Howard* 10276 (NY); South Bimini, May 1948, *Howard and Howard* 10277 (NY); North Bimini, coppice past town, 21 April 1979, *Saulea* 2341 (USF). **Cat Island**, low coppice, 2 mi S of Stevenson, 19 Jan. 1979, *Saulea*, *Correll and Correll* 2184 (FAU); the Bight and vicinity, 22–23 Nov. 1907, *Wilson* 7170 (F, NY). **Crooked Island**, Land-rail Point, 9–23 Jan. 1906, *Brace* 4642 (F, NY, US). **Eleuthera**, Cape Eleuthera, low coppice, 4 June 1979, *Saulea* 2719 (FAU); The Current, palm forest, 2 June 1979, *Saulea* 2679 (FAU); near landing, road to the Bluff, 18 Feb.—4 March 1907, *Britton* 6419 (F, NY); Sunshine coppice, 18 Feb. 1906, *Britton and Millspaugh* 5428 (F); The Current, 5 July 1903, *Coker* 351 (NY).

Exuma Chain, Great Exuma, W of Moss Town, 22 June 1978, *Saulea*, *Adams*, *Adams and Correll* 2132 (B); Ship Channel Cay, 17 Feb. 1905, *Britton and Millspaugh* 2756 (F, NY); Jewfish Cay, 10 June 1970, *Gillis* 9365 (MO); Orchid Heights, Hummingbird Cay, 2 April 1968, *Kessler, Nickerson and Sammons* 2752 (MO). **Grand Bahama**, road to Deadman's Reef, 16 April—8 May 1906, *Brace* 3620 (F, NY). **Inagua Group**, Great Inagua, near Union Creek, 24 June 1978, *Saulea*, *Adams*, *Adams*, and *Correll* 2139 (L); 8 May 1935, *Fairchild and Dorsett* 99054 (AMES); white land, 14 Feb. 1904, *Nash and Taylor* 1049 (NY); Little Inagua, Oct. 1904, *Nash and Taylor* 1252 (NY); Alfred Sound, 31 May 1974, *Proctor and Gillis* 33866 (MO). **Long Island**, low coppice, 2 mi S of Clarence Town, 20 Jan. 1979, *Saulea* and *Correll* 2188 (FAU); dry coppice W of Clarence Town, 9 May 1970, *Hill* 532 (US). **New Providence**, Southside Beach, 31 Aug. 1904, *Britton and Brace* 385 (F, NY, US); coppice S of Fox Hills, 5 Sept. 1904, *Britton and Brace* 541, 546 (NY). **San Salvador**, Sandy Hook, south side of island, 15 June 1978, *Smith, Horgan, and Rumansky s.n.* (FTG). **Berry Islands**, Chub Cay, 1 mi E of runway, 21 April 1978, *Saulea*, *Correll* and *Eckenwalder* 2061 (L), 2062 (M), 2063 (B), 2064 (BM), 2065 (BR); Great Harbor Cay, off Pirate's Way, 17 Oct. 1974, *Correll and Correll* 43722 (FTG); low coppice, Stede Bonnet road, 12 May 1979, *Saulea* and *Correll* 2469 (USF).

DISTRIBUTION IN THE TURKS AND CAICOS ISLANDS: **Middle Caicos**, road between Free Town and Nango Town, 11 Feb. 1978, *Saulea*, *Adams* and *Correll* 2034 (FAU). **North Caicos**, Bellfield Landing, 12 Feb. 1978, *Saulea*, *Adams*, *Adams* and *Correll* 2049 (FAU); James Hill, *Saulea*, *Adams*, *Adams* and *Correll* 2051 (FAU); Whitby's Landing, 28 Feb.—2 March 1911, *Millspaugh and Millspaugh* 9164 (F, NY). **Providenciales**, open coppice on Hills, Long Bay, 18 Dec. 1975, *Correll* 46402 (FTG).

REPRODUCTIVE PERIOD: May through July.

ECOLOGY: This species is found growing epilithically on Pleistocene limestone and epiphytically on *Bumelia salicifolia* (L.) Sw., *Coccoloba diversifolia* Jacq., *Acacia choriophylla* Benth., *Pithecellobium guadalupense* (Pers.) Chapm., and *Coccothrinax argentata* (Jacq.) L.H. Bailey. The habitats in which it is found are Beach and Dune, High Coppice, Low Coastal Coppice, Coastal Rock Scrub, and Inland Scrub.

ADDITIONAL COMMENTS: We question the veracity of the Brazilian locality cited for the holotype of this species, since no other specimens of *Epidendrum* (= *Encyclia*) *rufa* have ever been collected in Brazil. Additionally, we question the accuracy of the Mexican locality cited for the holotype of *Epidendrum primulinum*, a synonym of *E. rufa*. No other specimens of *E. rufa* have ever been collected in Mexico. A single specimen of *E. rufa* (Small, Mosier and Matthaus, 12938) collected 24 May 1926 in a Hammock N of Eau Gallie, Brevard County, Florida is extant in NY. We believe that this specimen was probably introduced by travelers from the Bahamas since no other reports of the presence of *E. rufa* in Florida are extant. We are convinced that the distribution of *E. rufa* is restricted to the Bahama archipelago and Cuba.

13. ***Encyclia selligera*** (Batem. ex Lindl.) Schltr., Die Orchideen 211. 1914 (Fig. 13).

Basionym: *Epidendrum selligerum* Batem. ex Lindl., Bot. Reg. 24: Misc. 40. 1838. HOLOTYPE: Guatemala, *Skinner s.n.* (K-L, photograph seen).

Plant epiphytic, rhizomatous, to 65 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, ovoid to ovate, to 6 cm long, 4 cm wide, enclosed by scarious sheaths, to 3-leaved at apex; leaves coriaceous to rigid, erect, linear-ligulate, obtuse to acute, to 28 cm long, 2.4 cm wide; inflorescence terminal, to 59 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 30 flowers; floral bracts ovate-triangular, acute, to 4 mm long, 5 mm wide; ovary pedicellate, slender, to 2.8 cm long; sepals and petals green, streaked or suffused with reddish-brown; sepals elliptic-ob lanceolate to ob lanceolate, acute, thickened, concave above the middle, to 2.2 cm long, 8 mm wide; petals broadly obovate to spatulate, obtuse to acute, margin occasionally undulate-crisped, to 2.2 cm long, 6 mm wide; labellum adnate to base of column, deeply 3-lobed, to 1.8 mm wide, 1.9 mm long, light or dark purple, lateral lobes oblong to ovate-oblong, obtuse, clasping column, distally reflexed, midlobe separated from lateral lobes by a short isthmus, midlobe orbicular to obovate, apex subacute, margin undulate-crisped, upturned, callus is two keels diverging distally, passing into three low keels running nearly to apex, column

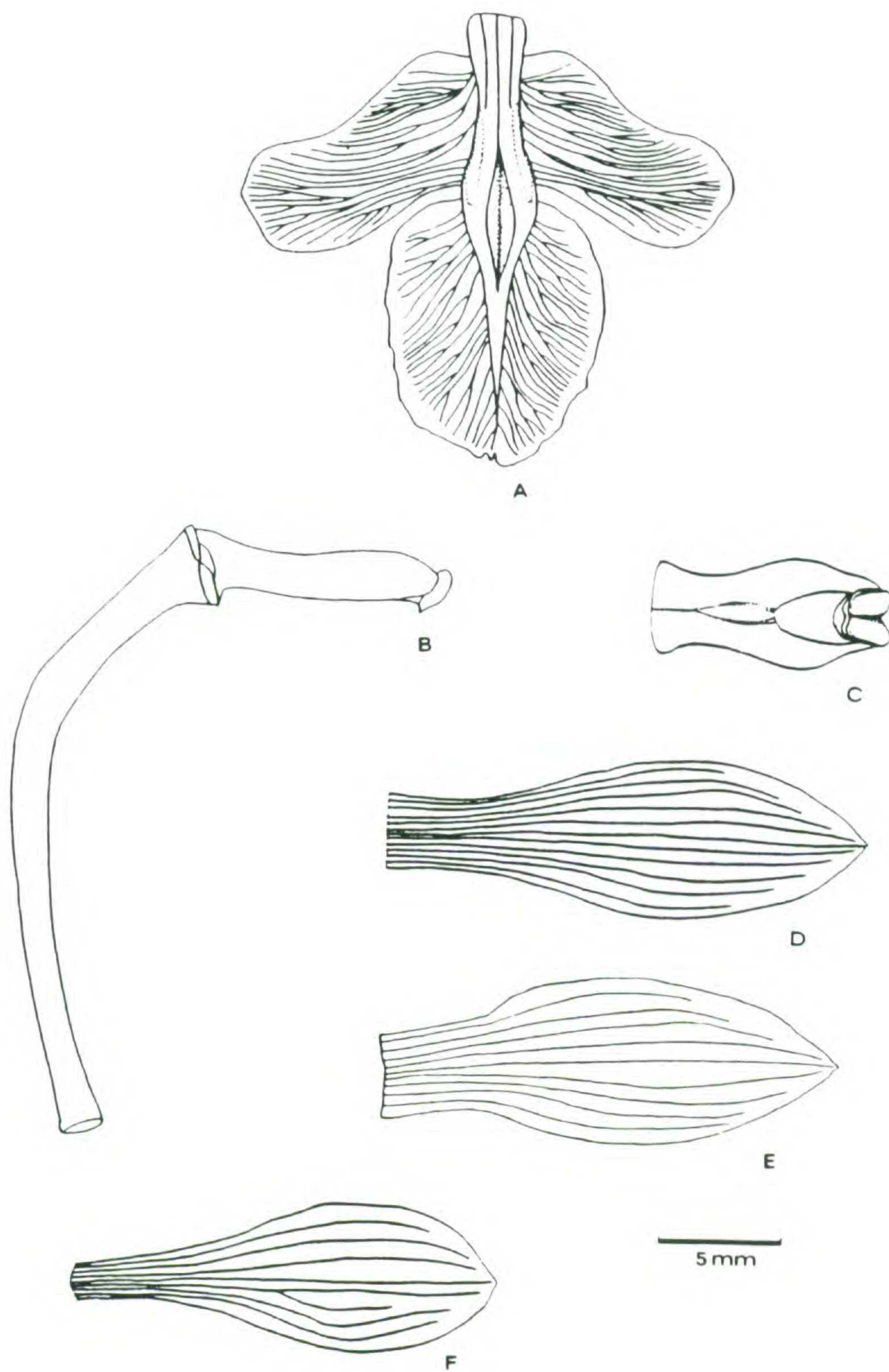


Figure 13. *Encyclia selligera* (Batem. ex Lindl.) Schltr. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

white with purple streaks, elongate, arcuate, to 1.3 cm long, 6 mm wide, lacking auricles, anther white; capsule pendent, to 3.5 cm long, 1.8 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Andros Island**, between Congo Town airport and Long Cay, along new road cut, 23 Sept. 1978, *Sauleda, Correll and Withner 2160* (FTG); 28 May 1979, *Sauleda 2547* (FAU), 2548 (FAU).

ADDITIONAL DISTRIBUTION: Reported by Ames and Correll (1952) from Chimaltenango, Guatemala and by Dressler and Pollard (1974) from Chiapas, Mexico.

REPRODUCTIVE PERIOD: May through July.

ECOLOGY: This rare species is found growing epiphytically on *Psidium longipes* (Berg) McVaugh in Low Coastal Coppices.

14. ***Encyclia tampensis*** (Lindl.) Small, Fl. Miami 56. 1913 (Fig. 14).

Basionym: *Epidendrum tampense* Lindl., Bot. Reg. 33: Misc. 35. 1847. HOLOTYPE: Tampa Bay, Florida, *Torrey s.n.* (K-L, photograph seen).

Epidendrum porphyrospilum Reichb. f., Linnaea 41: 80. 1877. HOLOTYPE: Cultivated; from Florida, (w, photograph seen).

Plant epiphytic, rhizomatous, to 70 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, elliptic to ovate, attenuate, to 5 cm long, 3 cm wide, basally enclosed by scarious sheaths, to 2-leaved at apex; leaves coriaceous to rigid, linear-lanceolate, acute, to 28 cm long, 2 cm wide; inflorescence terminal, to 65 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 30 flowers; floral bracts ovate-triangular, acute, to 3 mm long, 4 mm wide; ovary pedicellate, slender, to 3.5 cm long; sepals green, yellow or ochraceous with reddish-brown suffusion, oblanceolate, acute, to 1.8 cm long, 4 mm wide; petals green, yellow or ochraceous with reddish-brown suffusion toward apex, spatulate, subobtuse to acute, to 1.5 cm long, 3 mm wide; labellum free, deeply 3-lobed, to 2.0 cm wide, 1.6 cm long, white with radiating purple lines on lateral lobes, midlobe with a central purple spot, lateral lobes oblong-ligulate, obtuse, erect, embracing column, midlobe round, emarginate to apiculate, callosity under column is two lateral erect keels joined by a third keel at junction of lobes and with two additional ridges on each side;

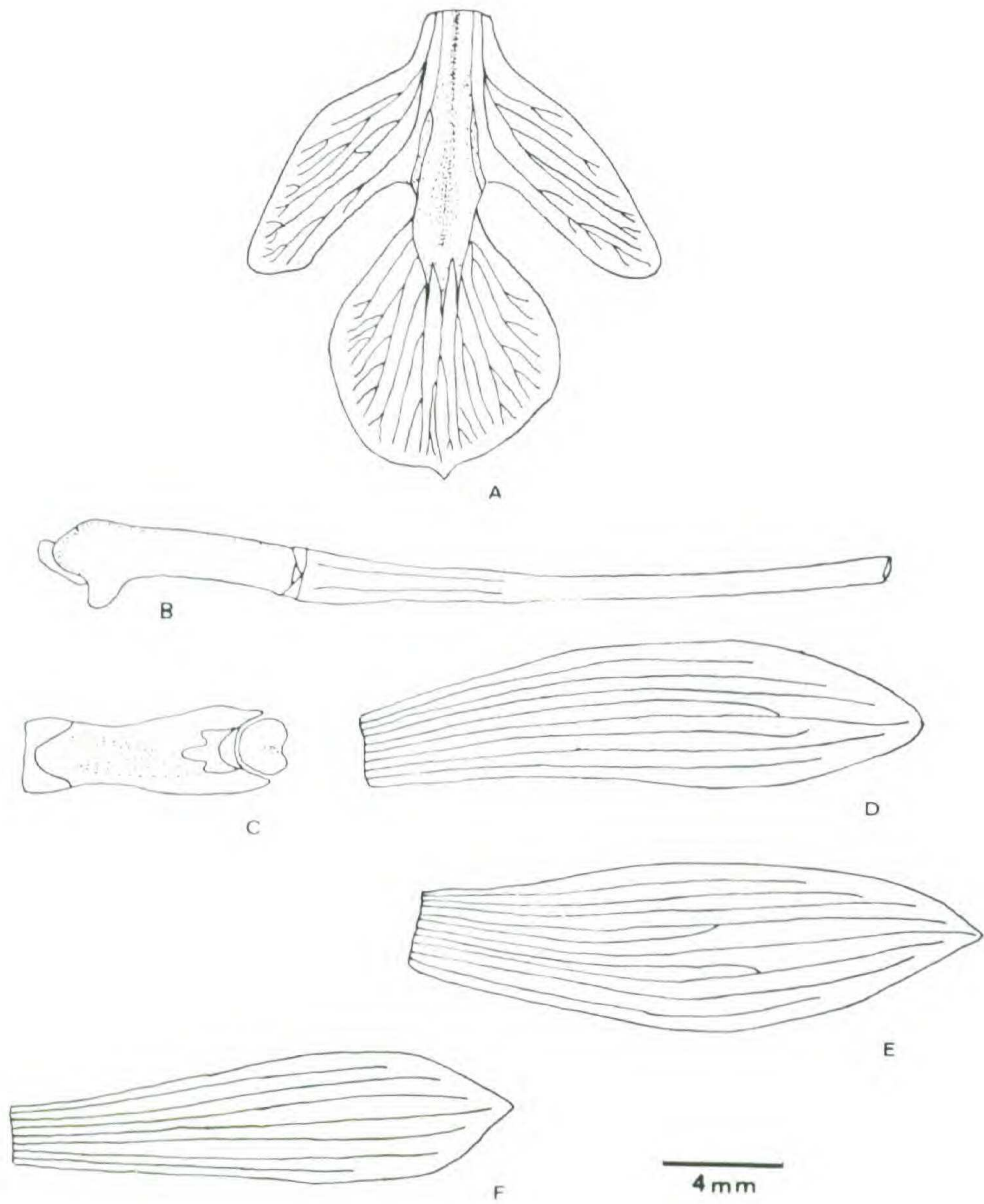


Figure 14. *Encyclia tampensis* (Lindl.) Small. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

column white, elongate, to 1.0 cm long, 4 mm wide, with membranaceous, incurved rounded auricles, anther yellow; capsules pendent, to 4.0 cm long, 1.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, low coppice, Abaco Heights, 2 Aug. 1979, *Sauleda, Adams and Adams 2762* (FAU). **Andros**, low coppice, Driggs Hill, 10 July 1976, *Sauleda 1008* (US), *1011* (NY), *1038* (AMES), *1047* (SEL), *1049* (FTG), *1061* (F).

ADDITIONAL DISTRIBUTION: **Florida**, *Brumbach 9014* (US).

REPRODUCTIVE PERIOD: May through July.

ECOLOGY: This species is found growing epiphytically on *Coccoloba diversifolia* Jacq. and *Acacia choriophylla* Benth. and grows in Low Coastal Coppices.

15. ***Encyclia withneri*** (Sauleda) Sauleda & Adams, *Brittonia* 33(2): 187. 1981 (Fig. 15).

Basionym: *Epidendrum withneri* Sauleda, *Amer. Orchid Soc. Bull.* 46(1): 34–35. 1977. TYPE: Andros, Bahama Islands, *Sauleda 1024* (HOLOTYPE: AMES; ISOTYPES: FAU, NY, USF).

Plant epiphytic, rhizomatous, to 70 cm tall; roots many, slender, velamentous; primary stem or rhizome short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect or ascending, clustered, ovate, to 5 cm long, 2 cm wide, basally enclosed by fugacious scarious sheaths, to 2-leaved at apex; leaves coriaceous, linear-oblong, acute, to 26 cm long, 1.5 cm wide; inflorescence terminal, to 65 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 30 flowers; floral bracts ovate-triangular, obtuse to acute, to 3 mm long, 3 mm wide; ovary pedicellate, slender, muricate, to 2.3 cm long; sepals ochraceous with reddish-brown striping toward apex, dorsal sepal oblong to oblanceolate, acute, to 2.0 cm long, 5 mm wide, lateral sepals narrowly elliptic to oblanceolate, acute, to 1.8 cm long, 6 mm wide; petals ochraceous with reddish-brown striping toward apex, obovate to oblanceolate, acute, to 1.8 cm long, 5 mm wide; labellum 3-lobed, basal one-third adnate to column, to 1.6 cm long, 2.0 cm wide, white with radiating purple lines, lateral lobes oblong-ligulate, rounded, erect, apex recurved, midlobe round, bilobed, emarginate, margin undulate, callosity under column is two lateral erect keels with two additional ridges on each side, keels

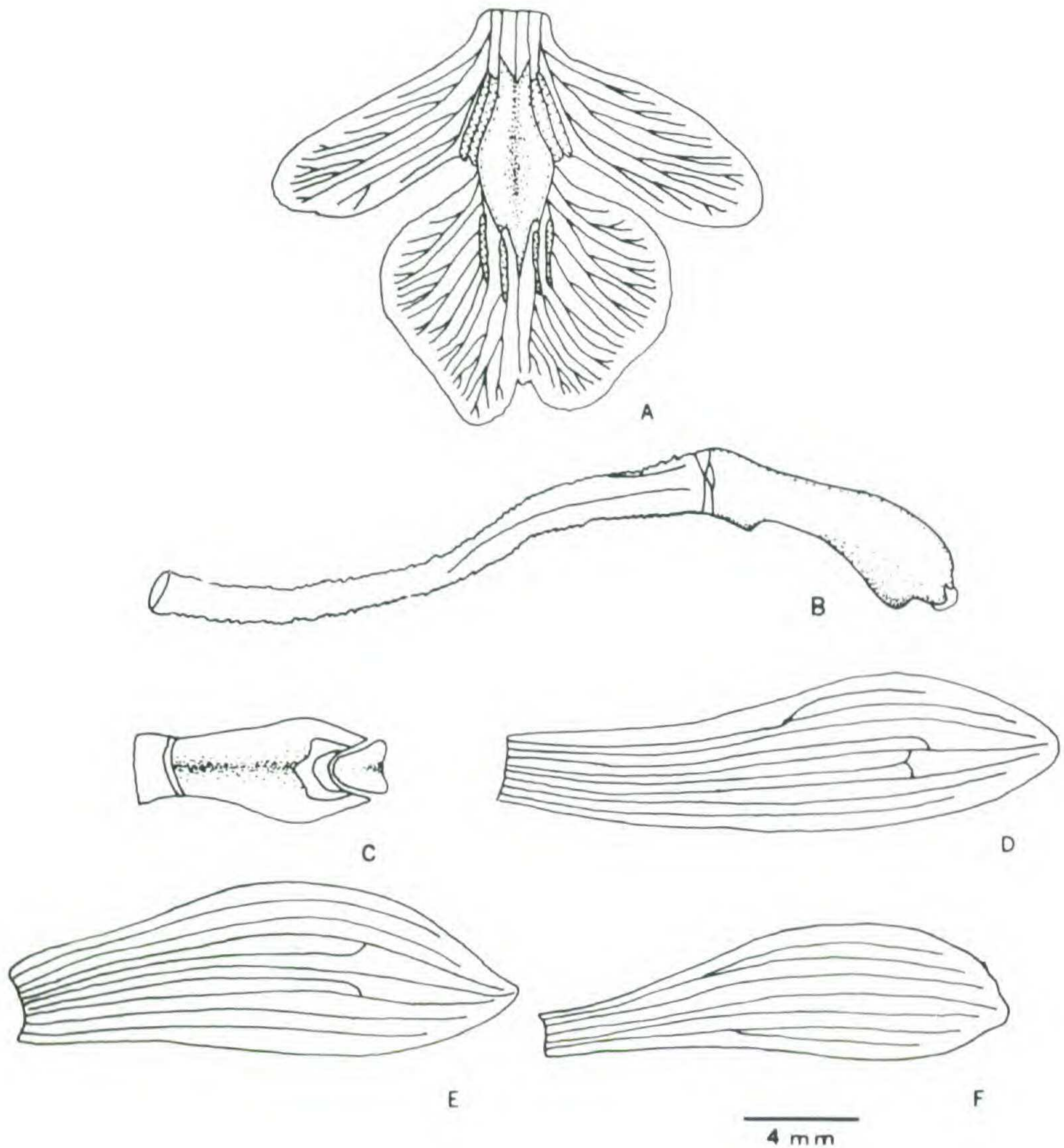


Figure 15. *Encyclia withneri* (Sauleda) Sauleda and Adams. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

terminate at junction of lobes with a fleshy, 3-dentate, plate-like callus, midlobe with five radiating, undulate, lamellae in front of callus; column white, elongate, to 1.0 cm long, 4 mm wide, with membranaceous, incurved, rounded auricles, anther yellow; capsules pendent, to 2.5 cm long, 1.5 cm thick.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Andros Island**, on trees in high coppice near Kemp's Bay, 21 June 1976, *Sauleda* 1020 (FAU), 1023 (SEL), 1024 (AMES), 1025 (FTG).

REPRODUCTIVE PERIOD: May through June.

ECOLOGY: This species is found growing epiphytically on *Coccoloba diversifolia* Jacq. and *Acacia choriophylla* Benth. and grows in High Coppices. Endemic.

NATURAL HYBRIDS

16. *Encyclia* × *bajamarensis* Sauleda & Adams, *Brittonia* 33(2): 189–190. 1981. (Fig. 16).

Encyclia gracilis (Lindl.) Schltr. × *Encyclia rufa* (Lindl.) Britton & Millspaugh.

TYPE: Bahama Islands, Great Abaco, low coppice, Snake Cay Road, 27 May 1979, *Sauleda and Correll 2544* (HOLOTYPE: NY).

Plant predominately epilithic, rarely epiphytic, rhizomatous, to 145 cm tall; roots, many, slender to thick, velamentous or canescent; primary stem short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect, clustered, elliptic-ovate to subulate, to 12 cm long, 7 cm thick, basally enclosed by scarious sheaths, to 4-leaved at apex; leaves coriaceous, stiff, linear to linear-lanceolate, acute, to 40 cm long, 3 cm wide, leaf bases lacking abscission layer; inflorescence, terminal to 133 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, lateral branches semi-erect, to 60 flowers; floral bracts ovate-triangular, acute, concave, to 2 mm long, 1.8 mm wide; ovary pedicellate, slender, to 3 cm long; sepals, yellowish-orange with reddish-brown striping, obovate to oblanceolate, acute, to 2 cm long, 8 mm wide; petals, yellow-orange with reddish-brown striping towards apex, oblanceolate to spatulate, acute to obtuse, to 1.9 cm long, 6 mm wide; labellum free, deeply 3-lobed, to 2 cm wide, 2 cm long, yellow with radiating purple lines on lobes, lateral lobes oblong, obtuse to subacute, erect, embracing column, midlobe round to subovate, emarginate, margin usually undulate, callosity under column is two lateral erect keels joined by a third keel at junction of lobes; column white or yellow, occasionally streaked with purple, to 9 mm long, 4 mm wide, with membranaceous, incurved, rounded auricles, anther yellow or white.

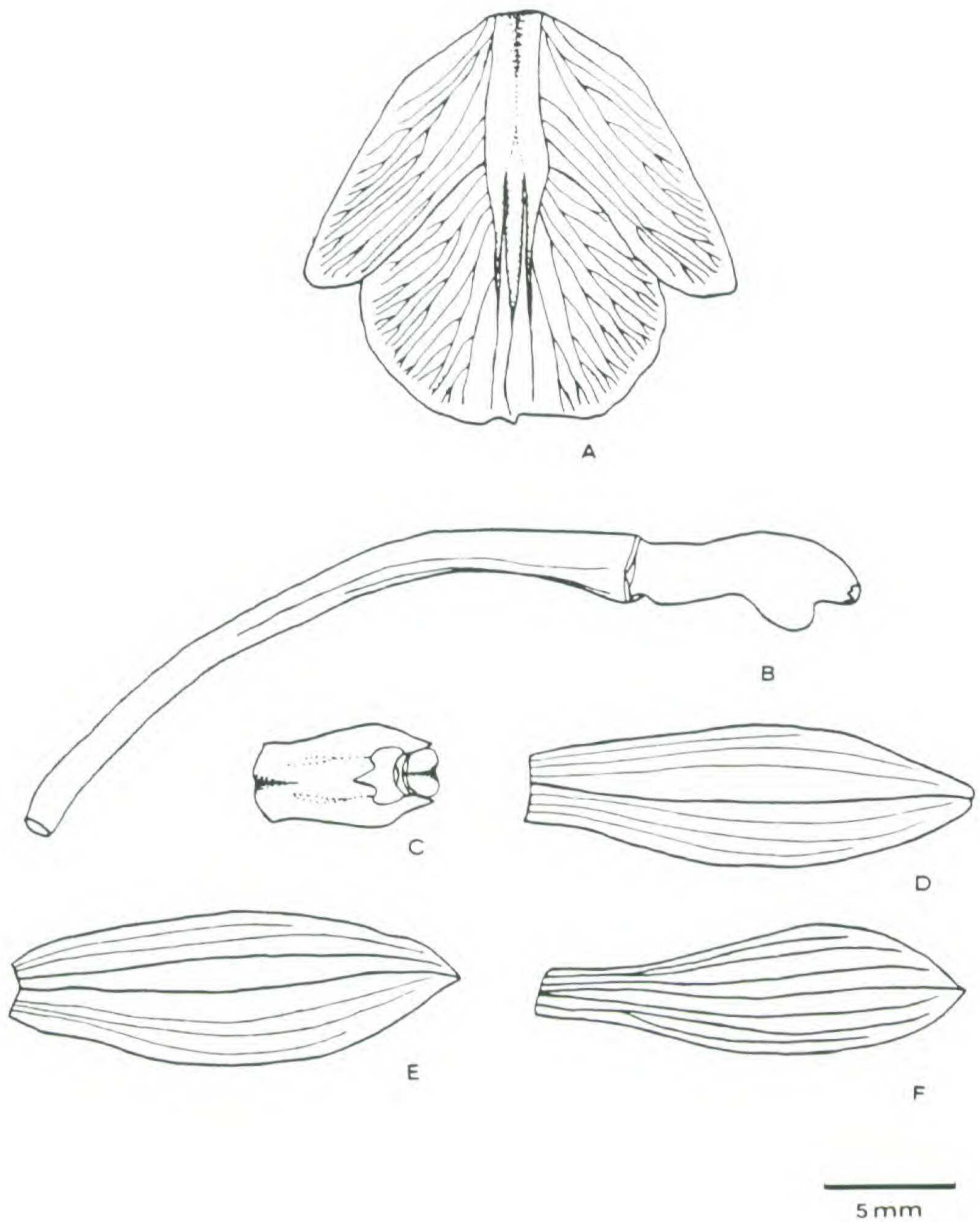


Figure 16. *Encyclia* \times *bajamarensis* Saulea and Adams. **A.** Labellum, frontal view; **B.** Column and ovary, lateral view; **C.** Column, ventral view; **D.** Dorsal sepal; **E.** Lateral sepal; **F.** Petal.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Great Abaco**, low coppice, Snake Cay road, 27 May 1979, *Sauleda and Correll 2544* (FAU). **Andros Island**, rock scrub, 8 mi S of Fresh Creek, 10 July 1976, *Sauleda 1067* (FTG); 15 Oct. 1976, *Sauleda 1148* (USF).

REPRODUCTIVE PERIOD: May through July.

ECOLOGY: This natural hybrid is found growing epilithically on Pleistocene limestone and occasionally epiphytically at the base of *Psidium longipes* (Berg) McVaugh. The habitats in which it is found are Coastal Rock Scrub and Low Coastal Coppice. Endemic.

17. *Encyclia* × *lucayana* Sauleda and Adams, *Brittonia* 33(2): 190–191. 1981 (Fig. 17).

Encyclia gracilis (Lindl.) Schltr. × *Encyclia fehlingii* (Sauleda) Sauleda & Adams

TYPE: Bahama Islands, Great Abaco, low coppice, Snake Cay road, 2 Aug. 1979, *Sauleda, Adams and Adams 2776* (HOLOTYPE: NY; ISOTYPES: US, USF).

Plant predominantly epilithic, rarely epiphytic, rhizomatous to 136 cm tall; roots many, slender to thick, velamentous to canescent; primary stem short, stout, creeping or ascending, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect, clustered, elliptic-ovate to subulate, to 9 cm long, 4 cm thick, basally enclosed by scarious sheaths, to 4-leaved at apex; leaves coriaceous, linear to linear-lanceolate, acute, to 47 cm long, 2.5 cm wide, leaf bases lacking abscission layer; inflorescence terminal, to 127 cm tall, peduncles slender, erect, distantly several-sheathed, paniculate above, to 60 flowers; floral bracts ovate-triangular, acute, concave, to 1.5 mm long, 1.5 mm wide; ovary pedicellate, slender, to 3 cm long; sepals and petals green to yellowish-orange, usually with reddish-brown striping; sepals elliptic to oblanceolate, acute, to 2 cm long, 5 mm wide; petals oblanceolate to spatulate, acute, to 1.8 cm long, 4 mm wide; labellum free, deeply 3-lobed, to 1.9 cm long, 1.9 cm wide, white with radiating purple lines on lobes, lateral lobes oblong, obtuse to subacute, erect, usually embracing column, midlobe round, emarginate, margin usually undulate, callosity under column is two lateral erect keels joined by a third keel at junction of lobes and extending on to disc; column to 10 mm long, 5 mm wide, white, occasionally with purple streaks, with membranaceous incurved rounded auricles, anther yellow or white.

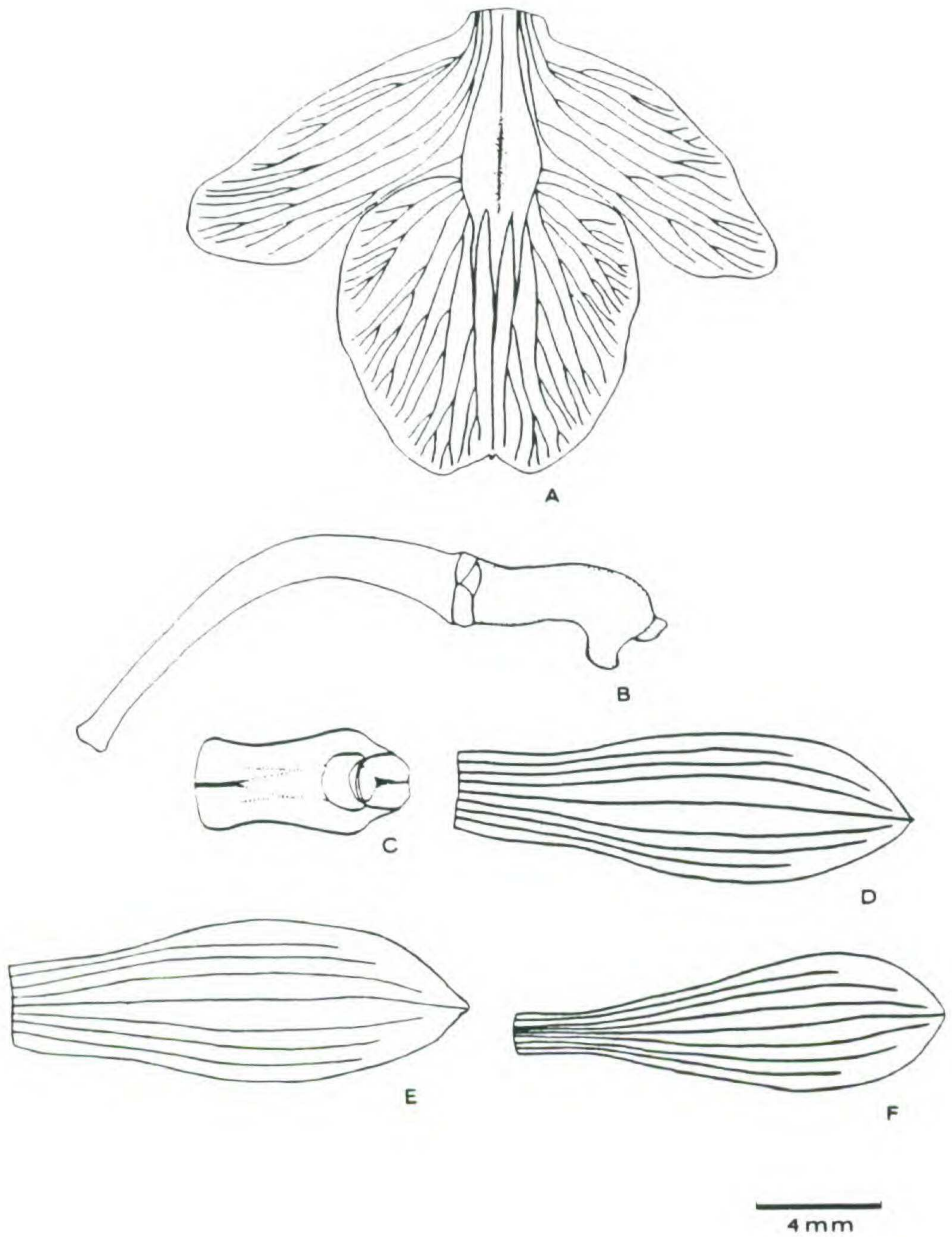


Figure 17. *Encyclia x lucayana* Saulea and Adams. **A**. Labellum, frontal view; **B**. Column and ovary, lateral view; **C**. Column, ventral view; **D**. Dorsal sepal; **E**. Lateral sepal; **F**. Petal.

DISTRIBUTION IN THE BAHAMA ISLANDS: **Andros Island**, low coppice, 3 mi S of Stafford Creek, 8 Oct. 1977, *Sauleda* 1976 (USF, FAU). **Great Abaco**, high coppice, 3 mi NW of Dundas Town, 2 Aug. 1979, *Sauleda, Adams and Adams* 2734 (US); low coppice, snake Cay road, 2 Aug. 1979, *Sauleda, Adams and Adams* 2776 (NY, US, USF), 2777 (FTG), 2778 (USF), 2779 (FAU); low coppice, Cherokee Sound, 3 Aug. 1979, *Sauleda* 2868 (FAU).

REPRODUCTIVE PERIOD: July through August.

ECOLOGY: This natural hybrid is found growing epilithically on Pleistocene limestone or epiphytically on *Psidium longipes* (Berg) McVaugh, *Coccoloba diversifolia* Jacq., and *Ateramnus lucidus* (Sw.) Rothm. The habitats in which it is found are Low Coastal Coppice and at the periphery of High Coppices. Endemic.

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